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A RECENT 6-4-4 REORGANIZATION

THE ARTICLE in this issue of the *School Review* reporting an analysis of treatments of school organization in recently published textbooks in the field of education makes mention of the fact that examples of systems operating on the 6-4-4 plan are to be found in several states. One of these is in Independence, Kansas. Shift to the 6-4-4 arrangement was made there at the opening of the school year in 1954. Independence is a city of about 12,000 population, a county-seat town of notable civic pride centrally located in Montgomery County, and about forty miles distant from Parsons (in Labette County), which has been operating on the 6-4-4 plan since 1935. It may be stated in passing that Parsons has recently reaffirmed its confidence in the plan by providing a commodious and admirably appointed new plant for one of its two four-year junior high schools, West Junior High School, which had until 1954 been housed in a superannuated structure formerly occupied by the original Parsons High School.

For some years before the reorganization in 1954, the secondary schools of the Independence system had consisted of a three-year junior high school, a three-year senior high school, and a two-year junior college; that is, the system was operating on the

6-3-3-2 plan. The three secondary-school units made co-operative use of a rather extensive plant consisting of an older high school and a substantial newer structure which had been built in the thirties. The two buildings were located on adjoining sites. The deterioration of the older building and the inadequacy of the two structures for housing three growing units became apparent, and in 1950 a study was made of the system. Major outcomes of the study were the recommendation of a new community-college plant and the reorganization of the system on the K-6-4-4, the kindergartens having been established as early as 1927.

Construction of the community-college plant, designed to house Grades XI-XIV, was completed in the summer of 1954 and was occupied in September of that year. The total site for the new plant consists of forty acres, of which about fifteen are used for the buildings (all on one floor), campus, and parking lots. The remainder of the site is being developed into practice fields and outdoor physical-education areas. The structures consist of four units: (1) an auditory unit, including auditorium and rooms for speech, band, orchestra, and chorus; (2) a "trades" unit, housing the printing, woodwork, metal-work, and mechanical-drawing classes; (3) a health and physical-education

unit, which includes gymnasium facilities; and (4) the academic and other special classrooms. A single library is provided for all four years. At the time of moving into the community-college plant, much new classroom and other equipment was added to that previously available for these four grades in the old plant. The beauty and simplicity of the architecture, the commodious provisions of space, and the equipment provided yield a favorable impression of the adequacy of the plant for the purposes intended. The enrolment in the four-year community college to date for the school year 1955-56 is 579.

The four-year junior high school of the system is housed in the newer of the two main structures at the old site, and some reconstruction was necessary to adapt it to its new purpose. The older building has been removed and the space it occupied made available as a play area for the junior high school. Space for the junior high school has been somewhat increased by removal of the superintendent's offices to a remodeled smaller building near at hand. Provisions of space for this junior high school unit are at present adequate and should remain so unless or until there is an unprecedented increase of enrolment in these grades. Equipment is available for a rather generous offering for the junior high school level. The enrolment to date for the current school year in Grades VII-X is 815.

The program of the Independence Community College is described in its *Bulletin of Information* at two levels, referred to as the "High-School Division" and the "College Division." The two classes at the high-school level are referred to as "Junior" and "Senior," while those at the college level are "Freshman" and "Sophomore." Credit is counted in "units" in the lower, and as "semester hours" in the upper, division. The offering at the high-school level is comparable to that in the last two years of senior and four-year high schools of good size, including a variety of courses in English, mathematics, social studies, natural science, foreign language, commerce, vocational

agriculture, and practical and fine arts. From the description of "requirements for graduation" it may be assumed that students receive high-school diplomas on completing the division.

The offering in the college division includes the usual array of academic subjects, plus courses in engineering, industrial arts, home economics, art, education, business, and "secretarial sciences." The *Bulletin* portrays, for the guidance of the student, a long list of "Suggested Courses"—in fact, twenty. Most of these are "pre" curriculums (pre-law, pre-engineering, etc.) in that they map out the first two years for students who plan to continue their education in higher institutions. However, certain of them, namely, "Clerical and Sales Course," "Secretarial Training," "Woodworking," "Metalworking," and "Printing," appear to be intended for "terminal" students. In harmony with the community-college concept the institution also offers courses in an evening school for adults of the vicinity, some for high-school or college credit and others without credit "for personal improvement."

The curriculum program of the junior high school consists, in Grades VII and VIII, mainly of required general subjects labeled "English," "Mathematics," "Science," etc., with a small proportion of electives in band, orchestra, chorus, or art. In Grades IX and X there are fewer required subjects, with a rather long list of electives, such as agriculture, art, home economics, Latin, mathematics, science, shop, speech, world history, etc. There has been some consideration of introducing the core-type curriculum with block-scheduling in the earlier years of this unit, but commitment to it has been delayed by financial obstacles to reducing the pupils-per-teacher load desirable for such a change.

Both lower and upper units maintain arrays of educationally significant extra-curriculum activities and organizations. These include athletic programs. In the upper unit there are interscholastic athletic schedules for the high-school division, and intercollegiate schedules (with junior colleges) for

the college division. The necessity for maintaining both high-school and junior-college athletic programs is imposed by the prevalent objection of two-year junior colleges to competing with teams drawn from the four-year span—an objection which will hardly be removed until there are more four-year units. To the credit of the administration of the athletic program in Independence, it can be reported that high-school teams in the upper unit do not draw on students in Grades IX and X of the lower unit, as such a practice tends to disrupt the student loyalties and morale within the latter unit.

Both units have guidance programs appropriate to their levels. The upper unit employs a director of guidance, with counseling and testing service maintained in a well-conceived and effectively operating program extending through both high-school and college divisions. Individual students in these four-year units have the advantage of guidance through longer continuous periods than is possible in the shorter units in a 3-3-2 succession of secondary schools.

Even from this brief and sketchy exposition of the reorganization in Independence, it is apparent that not all desirable vertical integration and realignment of the system was achieved during the first year of operation. Administrators and teachers in the system would be the first to concede this. Nevertheless, in the opinion of the writer, who has had opportunity for firsthand contact with almost all the 6-4-4 systems in the country, Independence has done no less well with the reorganization than any other system during the first year of working out the plan. Some of the long-run advantages of the 6-4-4 plan have been summarized from the books on education in the article in this issue previously mentioned, and they need not be re-enumerated here. It is in point, however, to mention a few of the immediate gains from the reorganization in Independence observable in the operation of the two units during the first year.

One of these obvious gains is the improved articulation of curriculum and instruction derived from having instructional

responsibilities of the teachers in both units extend through more grades than in other organizations. This improvement makes for better continuity and the avoidance of bootless duplication that is inevitable in schools where teachers at the upper level are ignorant of, and often disparage, what goes on in classes at a lower level. Another gain is in the provision of teachers at the upper high-school level with more extended preparation than are employed in schools without this reorganization for the reason that, in order to teach at both high-school and college levels, they must meet the certification requirements for teaching at the collegiate level. The gain in continuous guidance for the individual student throughout these longer units may be inferred from the explanation above of the provisions for guidance in these two school units.

Among the immediate benefits that are most manifest are the improved facilities available for both high-school and college levels in the community-college plant. Units limited to the two college years with the present enrolment in these years in Independence cannot provide such a range of facilities and must in consequence operate with meager programs or, if they do provide the facilities, must do so at unjustifiable cost. It is worth bearing in mind that as many as half the public junior colleges of the country have full-time enrolments no larger than that in the college division at Independence. For them, the possible types of organization, if they are to avoid inordinate costs, consist in the inevitable alternatives of integration with two high-school years into a four-year unit or of varying degrees of association with three-year or four-year high schools.

PROSPECTS OF THE 6-4-4 PLAN

Preference for the plan The analysis of textbooks in education previously mentioned as appearing in this issue is not the only study to show predominant preference for the 6-4-4 plan. A Doctor's thesis completed by Wood at the

University of Colorado in 1951¹ discloses a similar preference. Following a preliminary section on the history of school organization, this thesis consists of two main sections: one a report on patterns of organization in operation throughout the country; the other, on preferred organizations as indicated by respondents to an "opinionnaire." Sixty-nine "authorities," including forty-three college and university professors, five national and state officers, and twenty-one public school administrators, supplied the opinions tabulated for the section reporting preferences. The details of the study are far too extensive to be reported here, but the outcome may be illustrated by quoting the generalization bearing on the 4-year community college made by the author in his brief abstract of the thesis: "The experts believe the [Grades] XI-XIV division superior in all respects" (which are grouped as "administrative," "instructional," "personnel," and "psychological"). Because the college and university professors among the respondents outnumber the administrators and because no separate analysis of opinions is made for the two groups, the question may be raised as to whether this composite opinion is not weighted by a group sometimes characterized as "theorists," who might be more inclined than others to favor a novel pattern. The answer to this question is given in still another investigation previously reported in this periodical by Martorana.² Almost two-fifths of a sampling of superintendents of schools distributed to cities of 5,000 population and over throughout the country, who favor the inclusion of Grades XIII and XIV in the school system, were found to prefer the 6-4-4 to other plans, while fewer than a third favored the 6-3-3-2 plan. Thus the preference for the 6-4-4 plan may be said to be shared by both theorists and practitioners.

¹ W. Clement Wood, "Structural Organization of Public Schools in the United States." Unpublished Doctor's dissertation, College of Education, University of Colorado, 1951.

² Sebastian V. Martorana, "Superintendents View Plans of Grade Organization," *School Review*, LVIII (May, 1950), 269-76.

Reasons for recent slow growth

Despite the expectation from these indications of favorable attitude toward it, there is ground for doubt that the 6-4-4 plan has in recent years maintained the rate of commitments to it which it enjoyed during the decade from 1930 to 1940. In fact, there is report of defection from the movement, notably in California, where it experienced its first development. The retardation provokes speculation to identify the causes.

Among the most important influences toward such a slowdown is the fact that the junior-college movement itself, except in particular localities, reached something like a plateau in its growth. This may be illustrated by the increase between 1947-48 and 1953-54 of only ten units in the total number of public junior colleges, that is, from 328 to 338.³ During the same period the number of private junior colleges was dropping off sharply. The general slowdown has been induced by potent factors like the high rate of employment and the military draft, which absorb male youth of junior-college age. The history of the junior-college movement shows its most rapid increments of growth during periods of relatively low employment. While some of the most thoroughgoing commitments to the 6-4-4 plan have emerged from systems previously operating on the 8-4-2 or the 6-3-3-2 plans, this is less likely to take place than in systems first making upward extensions to include junior-college years. The reason is that systems with new upward extensions are less often hampered by vested interests of administrative and teaching staffs at high-school and junior-college levels and by imbedded tradition. Once a junior-college staff has the traditional experience with the junior college separated from high-school years, it is at least difficult, if not impossible, to woo its members to efforts to integrate the two levels.

Students of population growth as it af-

³ *Junior College Directory, 1955*, Table V, p. 43. Washington: American Association of Junior Colleges.

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fects collegiate enrolments have all been predicting a flood of enrolments that will inundate the colleges and universities within the next decade or so. Figures on enrolments during 1955-56 indicate that the influx is already on the way. The lack in existing higher institutions of accommodations for the flood is expected to stimulate the establishment of many new public junior colleges, and more of these will be free to fall under the influence of the preponderant preference for the 6-4-4 reorganization. Thus we are warranted in expecting a re-acceleration in commitments to it with the impending increase in systems extending through junior-college years.

Another factor inimical to the spread of the 6-4-4 plan is an obstructive district organization. This is unquestionably true in California, where the 6-4-4 plan had a spurt of growth in the thirties and where nearly all the systems once committed to it have since abandoned it. This is clearly admitted as the cause of relinquishment of the plan in Pasadena, in an article by the superintendent which, after explaining the district obstacle to continuance, he concludes by saying, "It should be pointed out that, although some dissatisfaction had been expressed with the 6-4-4 plan in Pasadena, the impetus that caused the change to be made was of a *technical rather than an educational nature*."⁴ The obstacle is instanced again in the history of the Compton Secondary School District, which was committed to the 6-4-4 plan in 1930 and was one of the first to abandon it.

The district organization in California is a three-story affair with all three levels—elementary, high-school and junior-college—in the same area often autonomous with respect to each other and under separate independent boards. It is typical for a high-school district to include several elementary districts and for a junior-college district to include two or more high-school districts. The obstacles to vertical integration of

schools leak over, to some extent, into city school systems, where all three levels are under single boards. To the degree that district organization in other states is similar to that in California, by having different levels under autonomous boards with non-coterminous district boundaries, similar obstacles to plans of organization that require vertical integration exist. Fortunately the stricture does not apply in many states. Experts on district organization are inclined to disparage two- and three-story organizations, and one important reason is the interference with vertical integration of schools.

Of course the sheer novelty of a plan including so many departures from the traditional must be no inconsiderable obstacle prior to commitment and during the early stages of operation on the 6-4-4 plan. The statement quoted above from Superintendent McComb, made after Pasadena's more than twenty years of experience with the plan, inspires confidence that most, even if not all, of this opposition can be removed. That opposition to the plan may in some degree have been an element in the lamentable ruckus over the superintendency in Pasadena a half-decade or so ago was admitted by the committee reporting for the National Commission for the Defense of Democracy through Education of the National Education Association.⁵ However, the more extensive story by a newspaper reporter of the ouster of former Superintendent Goslin mentions the 6-4-4 plan only once throughout all its more than 160 pages⁶ and then not as a possible influence in the disturbance.

Some may think they see discouragement of the 6-4-4 plan in the recent shift of emphasis in the University of Chicago from the 4-year college beginning with the third high-school year to the college with the same span beginning after graduation from high school. Whatever may have been the thought when

⁴ Stuart F. McComb, "Why Pasadena Dropped the 6-4-4 Plan," *Nation's Schools*, LIV (November, 1954), 60-61. (Italics not in original.)

⁵ National Commission for the Defense of Democracy through Education, *The Pasadena Story*. Washington: National Education Association, 1951.

⁶ David Hulburd, *This Happened in Pasadena*, p. 15. New York: Macmillan Co., 1951.

the former plan was instituted, it should be clear now that, after a century and more of extending *local public* education upward in this country (first through the higher elementary grades, next through high-school years, and latterly into junior-college years), to undertake to reverse this trend by encouraging the interruption of high-school careers near the home base is like trying to make headway upstream against a current of strong and profound social forces. The experience at the University of Chicago has, however, contributed substantially to assurance of the feasibility and desirability of the 4-year community or junior college in several ways, among them by demonstrating the appropriateness of replacing current offerings in later high-school and early college years by a vertically integrated curriculum; by proving the competence of superior youth in later high-school years to succeed in work of college caliber; and by accelerating the progress of some of these superior youth through this 4-year span.

6-4-4 and 6-3-3-2 compared The article by Superintendent McComb mentioned above is so eminently fair in its discussion of the 6-4-4 and 6-3-3-2 plans that it seems desirable to rely on it further for the brief comparison possible here of their respective merits. He says that those who favor the 6-4-4 plan set forth the following points in its support:

1. The longer span in both the 4-year junior high school and the 4-year junior college makes possible better planning and greater continuity in guidance and curriculum.
2. The presence of the tenth-graders in the junior high school provides a stabilizing factor and a more mature student relationship. The same is true in the 4-year junior college, where the thirteenth- and fourteenth-year students are together with the eleventh- and twelfth-grade students.
3. The 4-year junior college provides the eleventh- and especially the twelfth-grade student with superior facilities. The twelfth-grader has available an extremely rich educational offering, since he may take many junior-college-

level courses. This feature makes acceleration possible.

4. The student body of a 4-year junior college has more continuity and stability than has that of a 2-year junior college, a majority of whose students are new each year.

5. A 4-year junior college adjusts more easily to extremes of low and high enrolment caused by war and depression than can a 2-year college.

6. The 4-year junior college claims superior holding power.

Superintendent McComb says that persons dissatisfied with the 6-4-4 plan and favoring the 6-3-3-2 plan have brought out the following points:

1. The 6-3-3-2 plan is more widely accepted in California and elsewhere than is the 6-4-4 plan.

2. The 6-4-4 organization creates problems of interscholastic relationships, especially in athletics. . . .

3. In the 6-3-3-2 plan nearly all junior-college students enter the first year of the 2-year junior college together, whereas in the 6-4-4 plan a large number of students (from adjacent districts which have no junior colleges) enter at the thirteenth year or middle of the 4-year junior college.

4. Since laws and tradition respect the break at the end of the twelfth year, the administration of the 4-year junior college is sometimes awkward.

5. The greater freedom allowed college students sometimes seems inappropriate for eleventh- and twelfth-graders, who are treated as college students under the 6-4-4 plan.

6. There is too wide a span in the physical and maturity levels between the seventh-grade students and the tenth-grade students in the 4-year junior high school. The same wide span prevails between students in the 4-year junior college.

Most or all of the considerations favorable to the 6-4-4 plan as mustered by Superintendent McComb, and still other arguments, have the backing of objective inquiry.⁸ If the present writer were to revise these considerations as quoted, he would make much more of the appropriateness of the age grouping in the 6-4-4 plan. The evi-

⁸ Leonard V. Koos, *Integrating High School and College: The Six-Four-Four Plan at Work*. New York: Harper & Bros., 1946.

⁷ Stuart F. McComb, *op. cit.*

dence on this has been admirably summarized by another member of the professional staff in the Pasadena system.⁹ It is difficult to conceive of any consideration more fundamental to grade grouping in the schools than the stages of physical, mental, and social growth of youth.

Concerning the first point cited on behalf of the 6-3-3-2 plan, it may be said that, if the same attitude had been assumed while the schools were almost universally on the 8-4 plan, there would never have been a junior high school or a junior college. This is to say nothing of total obstruction of educational and social progress by following a general policy of conformism. The second, third, and fourth points cited for the 6-3-3-2 plan specify further difficulties arising from breaking with tradition, while the fifth and sixth revert to the issue of fundamental age grouping in the school system.

Variety in organization is inevitable A truism in education has it that American schools will always manifest wide variation in development and organization. We are never likely to achieve a uniform organizational pattern, whether it be the 8-4, 6-3-3-2, 6-4-4, or any other. This is because control by the states differs widely and because of the large degree of autonomy and of diversity in needs and conditions at the local level. The same variation and autonomy should, however, permit and encourage more extensive adoption than at present of a plan of organization like the 6-4-4 known to hold the considerable advantages established by objective inquiry and discerned by both theorist and practitioner. Among these advantages are increased democratization of educational opportunity; a fundamental age grouping of youth; improved continuity of curriculum and guidance; encouragement in accelerating more capable youth; better use of administrative and teaching personnel;

and increase in, and economical use of, facilities at both high-school and college levels.

Leadership imperative It should be admitted that these advantages of the 6-4-4 plan over other plans, while notable, are only in part automatic. Reorganization on this plan is far more than a mere rehousing of the school population. It must extend into basic vertical reform in the curriculum, extra-class activities, guidance, administrative and teaching assignments, and the like. Repeated visits of the writer to most of the systems that have operated on the plan convince him that a high quality of leadership is required for success with this arrangement—a leadership that is alert to the many values attainable and the means of attaining them; that is persistent beyond the early stages of securing commitment of a system to the plan through the critical years of working out its details and winning and holding public acceptance; and that is courageous during the periods when, as is to be expected, the novel provisions require interpretation and defense. The fact that leadership of this character is available has been demonstrated by the instances of success with this particular organization, as well as in other areas where educational improvement has been worked out in school systems of the country.

LEONARD V. KOOS

THE INTERNATIONAL READING ASSOCIATION

THE International Reading Association began to function January 1, 1956. It was formed through a merger of two existing organizations, namely, the International Council for the Improvement of Reading Instruction and the National Association of Remedial Teaching.

The chief purposes of the new association combine and extend those of its two parent organizations. They are: to improve the effectiveness of instruction in reading (developmental, corrective, and remedial) at all levels, from the kindergarten through

⁹ Robert T. Ross, "The Good and Bad Points of the 6-4-4 Plan," *School Executive*, LXVIII (October, 1948), 73-74.

college; to serve as a clearing-house for information relating to reading; to sponsor conferences planned to discuss the wide range of reading problems faced today; to stimulate needed research in the field of reading; and to publish reports of sound practices and the results of pertinent studies.

The new association begins its career under very favorable conditions. It has an initial membership of about seven thousand, representing every state and several provinces of Canada. It will continue to publish the *Reading Teacher*, which has already attained international distinction, and to sponsor local, regional, and national meetings.

The first annual meeting of the association will be held on Friday and Saturday, May 11 and 12, 1956, in Chicago at the Morrison Hotel. The discussions will center in the theme "Better Readers for Our Times." The conference will open with pointed discussions of the need for better readers, followed by sectional meetings at various levels, from the primary grades to college, on "The Nature of Reading Programs Adapted to Today's Needs."

The Friday afternoon program will first seek to define the nature of the progress made thus far in developing efficient readers and will then consider the challenging problems and controversial issues still faced. These discussions will be followed by a series of sectional meetings which will focus attention on best practices to follow in many controversial areas (as indicated by tested experience and research). The Friday evening program will present in dramatic form the way in which mass media and other aids to learning are contributing to the improvement of reading.

The Saturday morning meeting will focus attention on the causes of reading retardation and on classroom and clinical procedures in diagnosing and correcting them. A luncheon meeting is planned, at which William S. Gray, president of the association, will discuss "The Role and Challenge of the International Reading Association." Sec-

tional meetings in the afternoon will review the chief proposals made throughout the conference and consider practical ways of implementing them.

The executive secretary of the association is Donald L. Cleland, Reading Laboratory, University of Pittsburgh, Pittsburgh 13, Pennsylvania, from whom information concerning membership in the association and details concerning the annual meeting may be secured.

INSTITUTE ON SCHOOL BUILDINGS

AN INSTITUTE on School Buildings will be held at the University of Chicago on May 1-3, 1956. Jointly sponsored by the Department of Education, the Midwest Administration Center, and the *School Executive* magazine, the institute will feature the architectural exhibits submitted to the fifth annual competition for better school design sponsored by the *School Executive*.

The three-day conference will begin at 9:30 A.M., Tuesday, May 1, with consideration of some of the ideas which are promising to shape the school of the future. At a luncheon on Wednesday, May 2, the winners of the *School Executive* competition for better school design will be announced, and on Wednesday afternoon the best in current school design will be presented through interpretation of the exhibits by architects and administrators most familiar with them. During the morning of Thursday, May 3, specific problems of organization and of finance for school-building will be considered. The final session will feature clinics in which resource teams will be available to advise boards, administrators, and interested citizens on specific problems of community interpretation, school design, school construction, and school-building financing.

Representatives of the American Association of School Administrators, the American Institute of Architecture, the Associated Exhibitors, and the National School Boards Association assisted in planning the Chicago institute. The best in current thought and design in school-building will be assembled

for study by local school officials throughout the Midwest. Two other conferences are being planned around the design exhibits: one at the University of Pittsburgh on May 14-18, and the other at Teachers College, Columbia University, on May 28-June 1.

More detailed information on the Chicago conference may be obtained by writing the chairman of the planning committee, James G. Harlow, Department of Education, University of Chicago.

READING WORKSHOP

THE FOURTH annual workshop in reading at the University of Chicago will begin on July 2 and continue through July 27, 1956. It is planned to meet the needs of classroom teachers, supervisors, administrators, instructors in teacher-training institutions, and remedial-reading teachers.

The topics included for study will be based on the problems listed by each applicant who is accepted. In addition to discussions, there will be demonstrations, guided reading, reports of completed projects, and observation in the Reading Clinic and other centers.

The workshop members will be divided into several groups, each with an outstanding leader. The high-school and college group will be under the direction of James M. McCallister. Advanced students of reading will work with William S. Gray, and those interested in remedial reading with Helen M. Robinson. Two other sectional leaders are Helen Huus and Mildred C. Letton.

Registration in the workshop is for one and one-half course credits, which is equivalent to five semester hours. Living accommodations may be secured in one of the University dormitories. Applications for admission should be submitted at an early date,

since registration in each group will be limited. Further information and application blanks may be secured from Mrs. Helen M. Robinson, University of Chicago, 5835 Kimbark Avenue, Chicago 37, Illinois.

WORKSHOPS ON EVALUATION OF LIBRARY MATERIALS FOR CHILDREN

THE Graduate Library School of the University of Chicago announces the first of three annual workshops on the Evaluation of Library Materials for Children, to be held August 9-11, 1956. The 1956 workshop will deal with library materials in the social studies; succeeding workshops will be devoted to library materials in the language arts and in the sciences, respectively.

The purpose of the workshop is to introduce the principles underlying the evaluation and selection of materials for different grade levels and to demonstrate the application of the principles to the evaluation of actual materials. The wealth of new and outstanding materials in the University of Chicago Center for Children's Books, Curriculum Materials Laboratory, and Education Library will be available for examination by registrants in the workshop.

Enrolment in the workshop is open to children's librarians in public libraries and to school librarians and teachers in elementary and junior high schools. Registration will be limited so that small groups can be established for intensive work with the materials themselves on each of the several grade levels. Early application is therefore advisable. Although course credit is not given for attendance at the workshop, a memorandum testifying to successful completion of the work will be supplied to teachers and school librarians requesting it. For further information, write to the Graduate Library School, University of Chicago.

THE 1955 NORMATIVE STUDY OF THE TESTS OF GENERAL EDUCATIONAL DEVELOPMENT

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University of Chicago



THE Tests of General Educational Development of the United States Armed Forces Institute were developed and standardized in 1943. Since that time the high-school level tests, which have been prepared in thirteen parallel forms, have been administered to several million individuals. The test results have been used as a basis for educational and vocational counseling of youth in the armed services. They have also been used by high schools, colleges, and industry as a basis for appraising the general educational development of individuals who have not been able to complete formal course work at high school. Most of the states have employed the GED tests as a basis for granting high-school equivalency certificates to individuals with scores above set levels.

The high-school-level battery of the Tests of General Educational Development consists of five comprehensive examinations concerned, respectively, with English composition, the social studies, the natural sciences, literature, and mathematics. These tests were designed to measure as directly as possible the attainment of some of the ultimate objectives of the entire program of general education. As such, they tend to minimize the more immediate and temporary content objectives of special school subjects. The emphasis in these tests is on intellectual power rather than on detailed content; on the acquisition of broad but definite generalizations, concepts, and ideas; and particularly on the abilities to comprehend exactly, to evaluate critically, and to think clearly in terms of such concepts and ideas,

rather than on the detailed facts from which the ideas and generalizations were originally developed.

DEVELOPMENT OF NEW NORMS

The normative data used in appraising the examinees' level of educational development were based on a nation-wide sample of high-school Seniors tested in 1943. Questions have been raised about the appropriateness of these norms in view of the possible changes in the schools between 1943 and 1955. At the request of the Commission on Accreditation of Service Experiences of the American Council on Education, the University Examiner of the University of Chicago submitted a set of plans for the development of new norms. The Office of Armed Forces Information and Education of the Department of Defense contracted with the University of Chicago to carry out this normative study.

In order to make the new set of norms comparable to the original set of norms, the procedures used in the 1943 normative study were employed in the 1955 study. These procedures are described in the following section of this paper. In a later section the results of the 1955 normative study are compared with those of the 1943 study to show the differences in test performance for these two national samples of high-school Seniors. The 1955 normative data are further analyzed to show the differences among the states and the relation between these differences and differences among the states for selected educational and social data.

The sample of high schools used in the standardization program was selected from

the United States Office of Education *Directory of Secondary Day Schools 1951-52*, which lists public high schools in the continental United States. The schools are listed alphabetically by states, and enrolment figures are given for each school.

For the country as a whole the regular high schools¹ were divided into five enrolment classes. Table 1 compares the distribution of regular high schools by enrolment in 1943 and in 1952. It is apparent that the total number of regular high schools has declined, with major decreases in the number of small schools. The increase in size of the high schools is indicated by the larger number of A and B schools in 1952.

TABLE 1

DISTRIBUTION OF REGULAR HIGH SCHOOLS OF
THE UNITED STATES ACCORDING TO
ENROLMENT IN 1943 AND 1952

Enrolment Class	Number of Schools 1943	Number of Schools 1952
A (1,000 and over)	1,106	1,180
B (200-999)	5,295	6,520
C (100-199)	5,684	4,856
D (50-99)	4,954	3,471
E (Under 50)	3,686	1,664
Total	20,725	17,691

From the 17,691 schools in the 1952 list, every sixth school (in alphabetical order) in Class A and every seventeenth school in each of the other classes were selected from each state. One or more additional schools were selected at random for each class in each state as a precautionary measure against possible low returns. In March, 1955, a letter explaining the purposes of the Tests of General Educational Development and the need for restandardization was sent to each of the 1,506 selected schools. The tests were eventually administered under standard conditions at the end of the spring term to the Senior students in 834 schools.

In the 1943 study, of the 1,280 schools invited, 814 schools (63.6 per cent) actually

¹ This does not include evening, technical, vocational, continuation, two-year, or Negro high schools. Nonaccredited schools were not included in the 1943 or the 1955 samples.

participated. In the 1955 study, of the 1,506 schools invited, 834 schools (55.4 per cent) participated. This decline of 8 in the per cent of favorable replies does not appear to be a significant factor in the sampling procedures, especially in view of the adequate sample finally secured for each size of school and for each state.

Table 2 compares the samples of schools for each enrolment class in the 1943 and 1955 studies. Both samples are quite adequate for each size of school as well as for total number of schools. In 81 per cent of the states the proportion of schools tested in each state in 1955 is equal to, or greater than, similar proportions for 1943. The total number of Seniors tested in 1955 was 38,773 as compared with a total of 35,330 in 1943. The adequate nature of the 1955 sample of schools and students attests to the excellent co-operation of the schools.

In the actual administration of the tests the procedures were identical with those reported for the 1943 study (6). The tests were administered to Senior students at some time during the last two months of school. In each school in which the Senior class numbered more than 100, the tests were administered to a sample of 100 students selected at random from the total list of graduating Seniors. In all smaller schools the tests were administered to all graduating Seniors. In every school in the sample, Test 1 was given to a strictly random fifth of all those tested; Test 2, to another random fifth; and similarly for each of Tests 3, 4, and 5. Accordingly, the total sample of Seniors taking any one of the five tests was strictly comparable to the sample taking any of the other tests; all 834 schools were proportionally represented in the sample of Seniors taking each test.

Following their administration, the tests were sent to the University of Chicago, where they were scored and checked and the results tabulated. For each test a distribution of scores was made for each school. (In any large school in which only a fraction of the entire Senior class had been tested, the frequencies in the distributions for that

school were weighted by the reciprocal of that fraction.) These distributions were then combined into a summary distribution for the schools in each enrolment class in each state separately. The schools represented in each of these distributions constituted only a fraction of the total number of schools in the corresponding enrolment class for the state involved. Accordingly, the frequencies in each of these distributions were weighted by the reciprocal of this fraction for the class involved. The weighted distribution for all five enrolment classes were then combined into weighted summary distributions for each state. Thus, for each test, the weighted frequencies in this summary distribution for

tional Development. These new norms are now available for test-users and are being incorporated into the new *Examiner's Manual* for the GED tests. Each of the high schools participating in the study has received reports on the test performance of its students, and each state department of education has received reports on the test performances of the Seniors tested in its state. Thus the original purpose of the study has been satisfied.

However, this is a unique compilation of test data. A relatively well accepted battery of achievement tests designed to measure some of the more important outcomes of education has been administered to approxi-

TABLE 2
COMPARISON OF SAMPLE OF SCHOOLS PARTICIPATING IN STANDARDIZATION OF GED TESTS IN 1943 AND 1955

ENROLMENT CLASS	1943		1955	
	Number of Schools in Sample	Per Cent of All Schools of This Size	Number of Schools in Sample	Per Cent of All Schools of This Size
A (1,000 and over).....	182	16.5	135	11.4
B (200-999).....	232	4.4	302	4.6
C (100-199).....	178	3.1	196	4.0
D and E (Under 100).....	222	2.6	201	3.9
Total.....	814	3.9	834	4.7

any state gave approximately the same results as if all Seniors in the state had been included in the standardization program or as if each test had been taken by a fifth of all Seniors.

The state distributions were then combined into a nation-wide distribution of raw scores for each test; the McCall *T*-scale technique (3) was applied to each of these distributions to transform the raw scores into standard scores. On this *T* scale a standard score of 50 corresponds to the test performance of a typical (median) graduating high-school Senior for the country as a whole, while standard scores of 70, 60, 40, and 30 correspond, respectively, to percentile ranks of 98, 84, 16, and 2 in the nation-wide distribution.

The primary purpose in making the 1955 GED normative study was to provide a new set of norms for the Tests of General Educa-

tional Development. These new norms are now available for test-users and are being incorporated into the new *Examiner's Manual* for the GED tests. Each of the high schools participating in the study has received reports on the test performance of its students, and each state department of education has received reports on the test performances of the Seniors tested in its state. Thus the original purpose of the study has been satisfied.

However, this is a unique compilation of test data. A relatively well accepted battery of achievement tests designed to measure some of the more important outcomes of education has been administered to approximately 5 per cent of the country's high-school Seniors in their last two months of secondary-school attendance. Data are available for each test for each school in the sample and for each state in the country. Similar data are available from the 1943 normative study on a parallel set of tests. In this paper the data will be analyzed to answer three questions: (1) What changes in test performance have occurred from 1943 to 1955 for the country as a whole? (2) How do the test performances vary from state to state? (3) How is the variation in the tested outcomes of education from state to state related to other social data about the states?

TEST PERFORMANCE IN THE NATION IN 1943 AND 1955

Form A of the GED tests was administered to the high-school Seniors in 1943, and Form X was used in 1955. These tests are

designed as parallel tests, and the scores on these two forms have been equated by actual administration to selected samples of high-school students. Perhaps the greatest difficulty in comparing two samples of students is to insure that parallel samples of students are involved and that the conditions of student motivation during the test are similar. Neither of these can be perfectly guaranteed, although similar sampling methods, test conditions, and instructions were employed.

With these qualifications in mind, it is possible to get a picture of the extent to which the level of performance of Seniors in 1955 is different from the level found in 1943. Undoubtedly there have been many developments in the high schools during this period of time with respect to curricular materials, teaching procedures, and testing methods. On the other hand, the increased enrolments of students and the mobility of the population have taxed the facilities of many high schools. How are the changes in the high schools reflected in the test performance of high-school Seniors? Chart 1 shows in graphic form the levels of performance of the total samples in 1943 and 1955 for each of the tests.

In each of the GED tests the performance of the 1955 sample of Seniors is higher than the performance of the 1943 sample. These consistent results give evidence that today's students are achieving to a greater extent the objectives measured by this battery of achievement tests than were the students of 1943. The greatest change is in mathematics, while the least change appears in the social studies. One way of expressing the change is to note that in mathematics the average Senior tested in 1955 exceeds 58 per cent of the students tested in 1943. In the natural sciences, literary materials, and English, the median Senior tested in 1955 exceeds approximately 54 per cent of the 1943 students, while in the social studies, the median 1955 Senior exceeds approximately 52 per cent of the Seniors tested in 1943. These differences are not attributable to chance variation in test results.

In general, the differences are such that

the entire distribution of scores has shifted up by about 5 percentile points. Assuming comparability of tests, test conditions, and samples of students, these test results indicate that the high schools are doing a significantly better job of education in 1955 than they were doing in 1943.

DIFFERENCES AMONG THE STATES

The state represents one of the major governmental units in controlling and supporting education. Undoubtedly the quality of education is in part determined by the extent to which local communities are stimulated and aided by state governmental agencies. Since the state represented one of the major units in summarizing the test results for the GED normative study of 1955, the data on the performance of Seniors in each state were available as one of the steps in the preparation of final norms for the entire country.

Since the Seniors were tested within the final two months of the school year, the results give some indication of the level of achievement of students who complete the program of secondary education in each state. Although these tests were not intended to measure the detailed subject-matter information possessed by the student, they were designed to measure some of the most widely emphasized problem-solving and comprehension objectives of public school education. The description of each test precedes the analysis of the data for the states.

Test 1. Correctness and Effectiveness of Expression [in English]

Part I is a spelling list of twenty items of four words each, in which the examinee is required to select the one misspelled word in each group of four words. Part II of the test consists of several themes or compositions which have been systematically corrupted by including many of the most common faults found in the writing of high-school and college students. Each theme is reproduced on the left-hand side of the page with certain words, phrases, and sentences underlined and numbered consecutively. On the right-hand side of the page, several ways of revising each numbered portion are given. In each

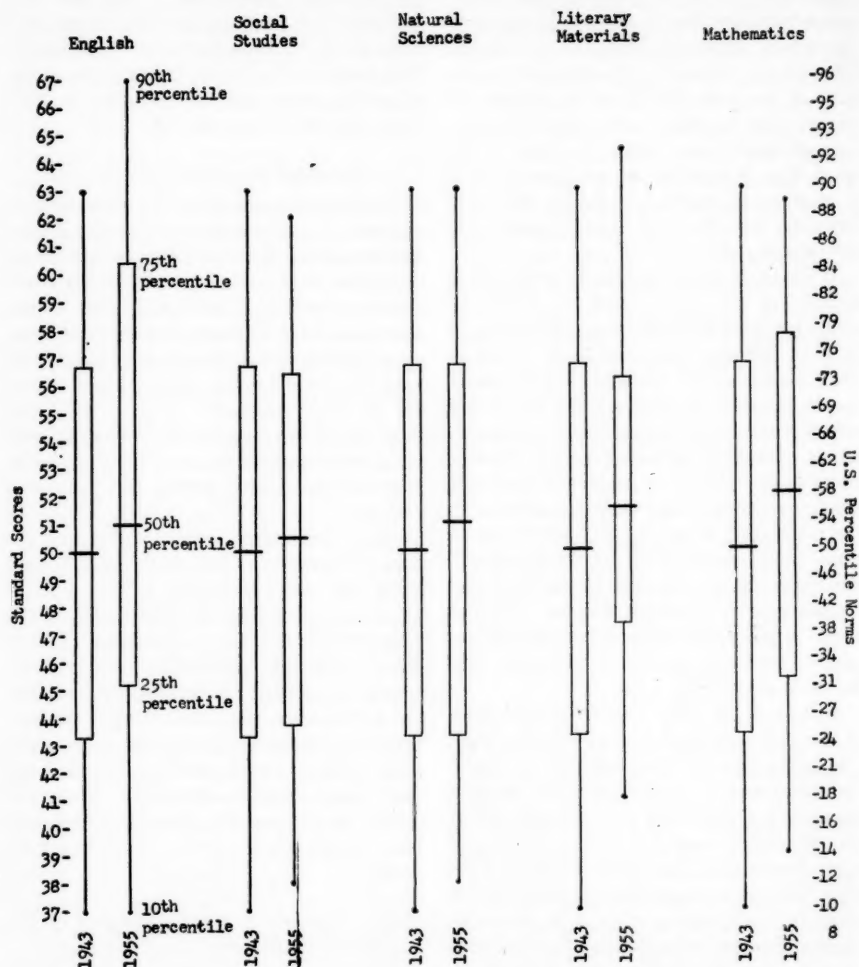


CHART 1.—Distributions of scores on each Test of General Educational Development for the total sample of high-school Seniors in 1943 and 1955. The 1955 scores are represented in terms of 1943 standard scores.

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exercise the examinee is required to select the one best or correct way of revising the faulty theme, thus restoring the theme to its original form. This larger context includes errors in choice of words, uniformity, coherence, emphasis, sequences of tenses, redundancy, parallelism, capitalization, agreement of subject and verb, complete sentences, etc. [6: 5].

In order to show the extreme of variations among the states, the state with the highest, and the state with the lowest, median score on each test have been selected and the results presented in Table 3 and Chart 2.² The

lowest state, whose median student has a score above 34 per cent of all high-school Seniors. Another way of looking at the comparison is to note that, if students were admitted to a college because they were in the upper half of the national distribution of high-school Seniors in competence in English, as measured by a test like this, 65 per cent of the high-school Seniors in the top state would be admitted, while only 33 per cent of the Seniors in the bottom state would meet such an entrance requirement.

If superior marks in English were as-

TABLE 3
COMPARISON OF SCORES FOR HIGHEST AND LOWEST STATE ON EACH OF
FIVE TESTS OF GENERAL EDUCATIONAL DEVELOPMENT

Criterion	Test 1 English	Test 2 Social Studies	Test 3 Natural Sciences	Test 4 Literary Materials	Test 5 Mathe- matics
Per cent of Seniors in highest state with scores higher than median Senior in lowest state.....	78	89	82	86	78
National percentile rank of median Senior:					
Highest state.....	66	69	74	68	68
Lowest state.....	34	19	24	31	34
Per cent of Seniors eligible for college admission (if the criterion were test scores in the upper half of the national distribution):					
Highest state.....	65	70	72	78	70
Lowest state.....	33	29	30	35	42
Per cent of Seniors earning superior marks (if the criterion were test scores in the upper 30 per cent of the national distribution):					
Highest state.....	47	52	53	48	48
Lowest state.....	22	15	11	18	26
Per cent of Seniors earning unsatisfactory marks (if the criterion were test scores in the lowest 30 per cent of the national distribution):					
Highest state.....	18	21	22	12	19
Lowest state.....	43	59	55	42	42

difference between the extreme states is apparent in the fact that 78 per cent of the students in the top state receive higher scores than the average student in the bottom state. For the top state, the median student scores above 66 per cent of all high-school Seniors in the nation, in contrast with the

signed to those ranking in the upper 30 per cent of the national distribution on a test like this one, 47 per cent of the Seniors in the top state, but only 22 per cent of the Seniors in the bottom state, would receive superior grades. If failing or unsatisfactory marks were assigned to the bottom 30 per cent of the national distribution of high-school Seniors, 43 per cent of the Seniors in the bottom state, and only 18 per cent of the Seniors in the top state, would receive such unsatisfactory grades.

Still another way of looking at the results

² The schools were invited to co-operate in order to develop a new set of GED test norms. In view of this, it does not seem appropriate to make public the performance of each school or state in this or other reports. In the charts each state is represented by a code number indicating its approximate rank in the total distribution of test scores.

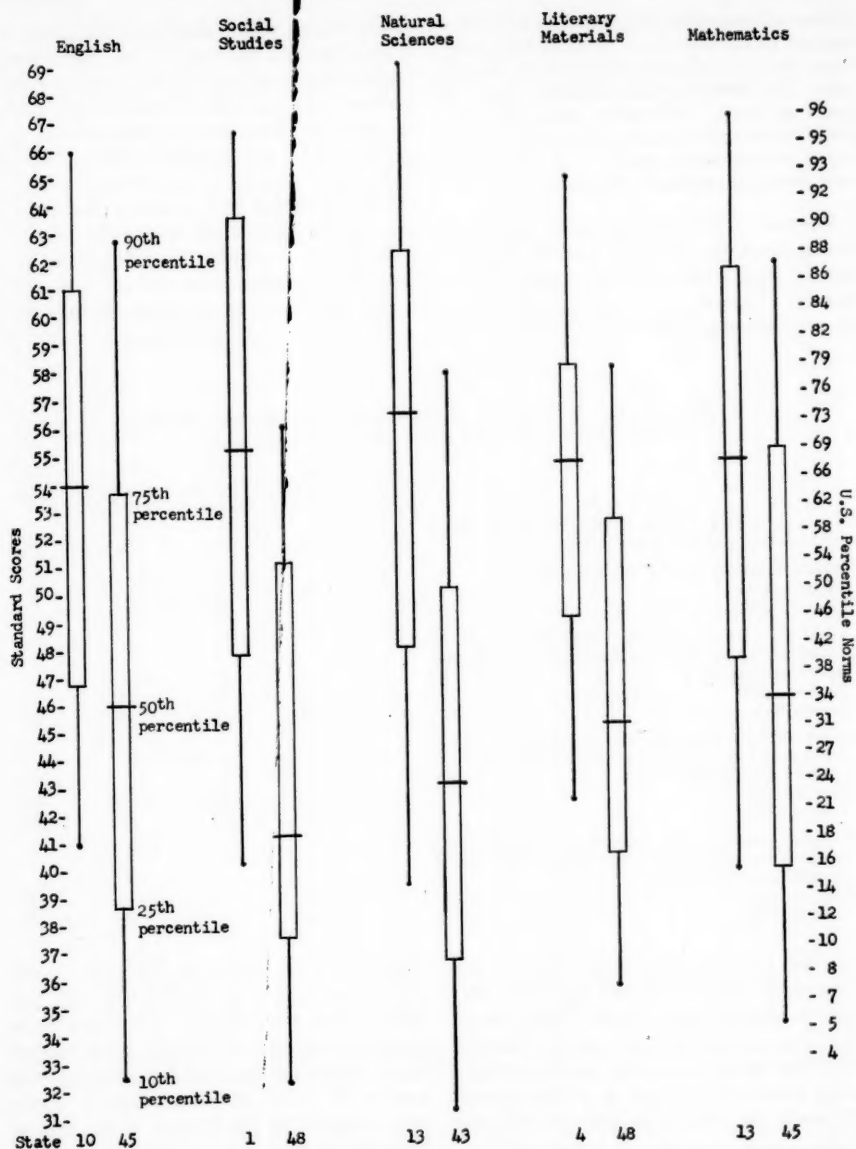


CHART 2.—Distributions of scores for the highest and the lowest state on each Test of General Educational Development in 1955.

is to note that a college which admits a sizable portion of high-school graduates of the bottom state is likely to have to give instruction in English which is primarily remedial rather than advanced in character. Thus college instruction in one state may do little more than bring the students up to a level of competence in English already attained by graduates of high schools in another state.

Although these two groups of students have completed approximately equal amounts of public education, one group is vastly superior in competence in English to the other. In one state the majority of high-school graduates have a competence in the use of English which will stand them in good stead in the great variety of situations in which effectiveness in written communication is regarded as important—writing letters, reports, and instructions to others, doing further work at the college level, and so on—while only a minority of the students in the bottom state are able to communicate effectively in written form. These skills in communication are so important in present-day society that in any competitive situation the students from the top state are likely to have a considerable advantage over the students in the bottom state—a competitive advantage that should eventually be translated into differences in economic position, social position, and cultural status.

Test 2. Interpretation of Reading Materials in the Social Studies

The social-studies test consists of a selection of passages from the field of social studies at the high-school level and a number of questions testing the examinee's ability to comprehend and interpret the content of each passage.

The type of test used in the social studies, the natural sciences, and the humanities is that in which the student is required to interpret and to evaluate a number of reading selections representative of those he will have to read and study in subsequent school work. . . . Through this type of test the student can be held both directly and indirectly responsible for a wide background of fundamental knowledge. One's

ability to interpret a printed discussion of any special subject obviously depends primarily upon how much he already knows and has thought about the subject involved and about the broad field from which it is taken. . . . The more of this background the student possesses, the greater is the likelihood that he will answer correctly the questions calling for a direct interpretation of the passage read. This type of test can thus require that an integrated body of knowledge be brought to bear on particular problems, without placing any undue premium upon the peculiar form or organization in which the student's ideas have been acquired, or without penalizing him unduly for inability to supply any particular fact or set of facts where another will serve the same general purpose.

While thus well suited to the task of determining the extent of the student's background of substantial knowledge in the field tested, this type of test has been selected for use in this battery primarily because of its effectiveness in measuring certain generalized intellectual skills and abilities needed by the student for success in his later school work. These include such abilities as those needed to detect errors and inconsistencies in logic, to develop and apply generalizations, to determine the adequacy of evidence, to draw inferences from data, to note implicit assumptions and to "dig out" meanings not explicitly stated, to form value judgments, to recognize as such an appeal to the emotions rather than to the intellect, to recognize and resist the tricks of the propagandist, to detect bias, and many other abilities involved in critical thinking in general [6: 5].

The comparisons of the highest and the lowest states made in Chart 2 and in Table 3 again show differences that are significant to the nation. The citizen is constantly being called upon to voice his opinion on complex social issues. His understanding of social phenomena and his ability to comprehend editorials, news columnists and commentators, discussions of social issues, political speeches, and the like, will in part determine his voting behavior, as well as the extent to which his social behavior and ideas are formed on a sound comprehension of the facts, values, and issues which confront him. The differences between the top and the bottom states reported here are likely to represent the difference between some so-

phistication about social problems and what must approximate illiteracy in this vital area for the citizen.

Test 3. Interpretation of Reading Materials in the Natural Sciences

This test consists of a selection of passages from the field of natural sciences at the high-school level and a number of questions testing the examinee's ability to comprehend and interpret the content of each passage.

The comparisons of the highest and the lowest states made in Chart 2 and in Table 3 show how the graduates from the highest and the lowest states differ in their understanding of the physical and biological sciences—an imperative for the citizen in the modern world. The ability to read with comprehension about new developments in science and the ability to relate principles, concepts, and ideas in science to everyday living may well make for differences in individual or group survival in an age of rapid scientific and technical development. These abilities are also essential for mastery of many technical and skilled vocations and are increasingly demanded in collegiate training. There is little doubt that, in any competitive relationship involving science, the high-school graduates from the bottom state are at a great disadvantage in comparison with students graduating from the high schools in the top state.

Test 4. Interpretation of Literary Materials

This test consists of a selection of passages, both prose and verse, taken from American and English literature, traditional and modern, and a set of questions testing the examinee's ability to comprehend and interpret the content of each passage. The concept of literary interpretation utilized in this test consists of the ability to understand the literal and figurative meaning of words as used in the context; the ability to summarize ideas, characteristics, facts; the ability to interpret the mood, tone, purpose, or intent of the passage; and the ability to determine the particular effects achieved by some of the simple literary techniques [6: 6].

In Table 3 and Chart 2 it may be seen that the average Senior in the top state exceeds 68 per cent of the nation's Seniors,

while the average Senior in the bottom state exceeds only 31 per cent of all high-school Seniors. Approximately 86 per cent of the Seniors in the top state make higher scores than the average Senior in the bottom state.

Skill in the interpretation of literary materials is necessary for a comprehension of novels, dramas, poetry, and other works of man's imagination. It is quite likely that one's interest in reading some of the best products of man's creativity and the ability to make use of this part of our cultural inheritance is, in large measure, determined by the ability to read and comprehend such works. It is likely that these pleasures and the opportunity afforded by reading to continue one's own development throughout life are markedly greater for the graduates of the top state's high schools than for the graduates of the bottom state's high schools. While there may be no economic or survival advantages accruing from this skill, many cultural and aesthetic advantages are undoubtedly concomitants of competence in this area.

Test 5. General Mathematical Ability

The test of general mathematical ability is a test of general problem-solving ability of a very practical sort. The problem situations vary widely in nature, including problems concerned with the estimating of costs of simple home-repair projects, evaluating and checking simple business transactions, understanding and ability to make use of basic arithmetic, algebraic, and geometric concepts, employment of and familiarity with various units of measurement, the use of tables, scale drawings, and graphs, a knowledge of indirect measurement and approximate computation and estimation, understanding of some of the mathematical aspects of insurance, taxation, instalment buying, investment, and statistics, etc. [6: 6].

Here again Table 3 and Chart 2 show marked differences between the distributions of scores made by Seniors in the top state and those made by Seniors in the bottom state. In our era mathematics has become more important in every aspect of life than has hitherto been true. Mathematics is a basic tool for most technical and skilled work; it is especially important for the con-

sumer in making business transactions, purchasing insurance, investing in real estate, buying on instalment plans, and so on; and it is an important prerequisite to many college programs of study. Undoubtedly the graduates of the high schools in the top state have a real advantage over the graduates of the bottom state. Such differences in test performance have economic consequences as well as implications for the individual's understanding of the many ways in which mathematics contributes to, and is basic to, the complex industrial and scientific civilization in which we live.

Performance on all tests

Each student participating in the normative study took one of the five GED tests. The test he took was determined by chance. Thus one fifth of the Seniors in a given school took Test 1, one fifth took Test 2, and so on. In order to secure an over-all estimate of the performances of students in each state, the results from all five tests have been combined into a summary distribution. Although this represents a combination of scores on five quite different tests, this method of combining the scores gives each test approximately equal weight in the total since all the scores are represented by standard scores with similar national means and standard deviations. From this point of view the combining of the scores is statistically defensible. Since the summary distribution contains the scores of all the Seniors tested in each state, statistical measures derived from it are somewhat more stable and reliable than are the separate distributions for each of the tests.

In Chart 3 the median summary score for each state is plotted from the top to the bottom state. Here again the results may be interpreted in terms of standard-score distance from the national median or in terms of the national percentile distribution for high-school Seniors. It will be noted that the median Senior in the top state is at the sixty-fifth percentile of the national distribution; that is, he exceeds the score made by 65 per cent of the country's high-school Seniors. The median Senior in the lowest

state is at the thirty-first percentile of the national distribution; that is, he exceeds the score made by only 31 per cent of the nation's Seniors. The state numbered 29 is just at the median for the country, that is, the median Senior in this state exceeds 50 per cent of the nation's Seniors.

Chart 3 shows the variation in level of performance on the total of the GED tests. Although the treatment of data up to this point has emphasized only the extreme states, charts similar to this would have shown the progression from the highest to the lowest state and the relative levels of performance on the different tests for each of the states.

RELATIONS BETWEEN TEST PERFORMANCE AND OTHER SOCIAL DATA

For many years research workers have compiled data on the differences among the states for such variables as the financial support for education, proportion of children enrolled in the schools, level of education of adults, etc. These workers have attempted to demonstrate that such variables are indicative of differences in educational opportunity and that such differences have significant effects on the state as well as on national welfare. The data used in such studies represent efforts to arrive at evidence on the financial and other contributions to the schools as well as the social milieu in which education takes place. If we consider the results on the Tests of General Educational Development as an index of the level of learning or outcomes of education, it is possible to analyze some of the relationships between what is "put into" the educational system and the "outcomes" of the educational system.

In making such analyses, it should be remembered that the test data are based on Seniors in their last two months of high school in regular public secondary schools. In those states in which segregation was still practiced at the time of the testing, only Seniors in white high schools are included. On the other hand, the indices available on the other variables are based on data for the entire state.

Support for education

In a thorough and scholarly fashion, Newton Edwards (2) demonstrated that in 1939 there were great differences among the states in financial support for education. He related these and other data to disparities in educational opportunity. More recently the National Education Association (4) published a pamphlet in which they report more recent data on the educational differences among the states. The thesis underlying most studies on support for education is that the level of financial support for education has consequences for the quality of education which is made available to the students. This is the thesis which is explored in the following analysis of the relation between the support for education and for libraries and the level of performance on the GED tests.

In 1951 the national average expenditure per pupil in average daily attendance for public education from state and local sources was \$217 (4: 21). The average expenditures per pupil varied from \$85 in one state to \$324 in another. If we compare the sixteen states which are highest on the GED tests with the sixteen states which are lowest, we find that 69 per cent of the top states spend more money per pupil than the national average, while only 25 per cent of the bottom states reach this level of financial support for public education.

Chart 3 summarizes these data in slightly different form. In this chart it will be noted that the eleven lowest states on the GED tests spend less than \$200 per pupil. However, it is instructive to note that several states spending less than \$200 per pupil rank relatively high on the test results; also that three of the top four states on the GED tests approximate the national average expenditure per pupil. Thus, although there is a relatively high relation between financial support for education and level of learning of high-school Seniors as measured by these tests, there are enough exceptions to demonstrate that financial support is not the sole determiner of quality of education.

Somewhat related to support for formal education is the support for less formal

means of education and self-improvement. The public library provides one means by which people can learn and improve themselves in various ways. The average expenditure per capita for public libraries in the United States is \$0.70 (7: 133). Fifty per cent of the top third of states on the GED tests reach this level of financial support for libraries or higher in contrast with only 6 per cent of the bottom third of states on these tests. Here again it is evident that financial support for libraries is generally related to level of educational achievement as measured by the test, although there are a few striking exceptions.

These data suggest that financial support for both formal education (the schools) and informal educational facilities (the public library) are generally related to quality of education of high-school Seniors as measured by the GED tests. With only a few exceptions, very low level of financial support for education is associated with low test performances. However, states with both average and high levels of financial support for education are found among the top group on the GED test results.

Educational status of the population

States vary greatly in the amount of formal education the adults have had and in the extent to which children and youth make use of existing educational facilities. The factors involved in educational status of the population are quite complex. However, economic and motivational factors are among the more important ones. The National Manpower Council has emphasized this in the following statement:

In short, much of the difference among states in college enrolment can be explained in terms of the ability to pay for higher education and of employment opportunities for college graduates. But this is not the whole story, for variations in the value placed upon education in different areas are also important. The same situation is found with respect to elementary and secondary schooling. Counties and states with approximately the same per capita income frequently differ widely in the quality of their school systems and the proportions of children enrolled in them [5: 88].

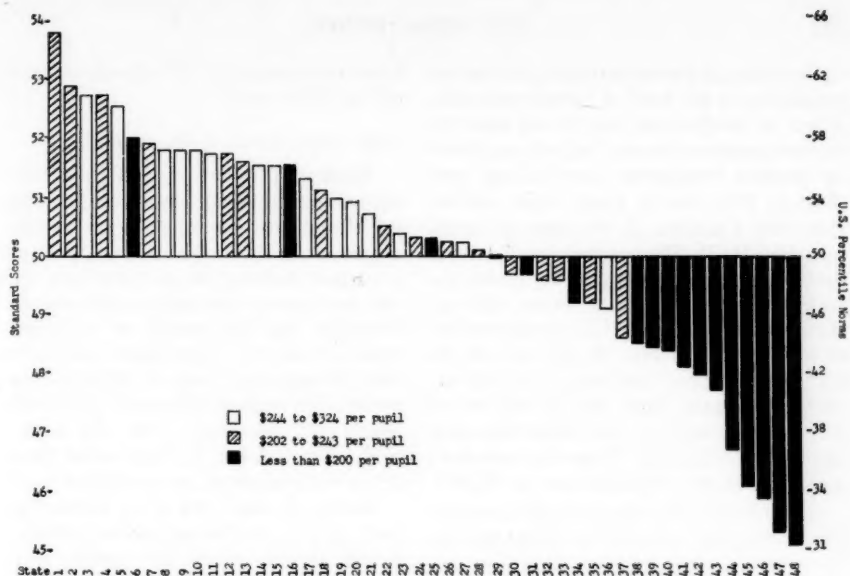


CHART 3.—States arranged according to median score on the Tests of General Educational Development in relation to level of expenditure per pupil for public education in 1950-51.

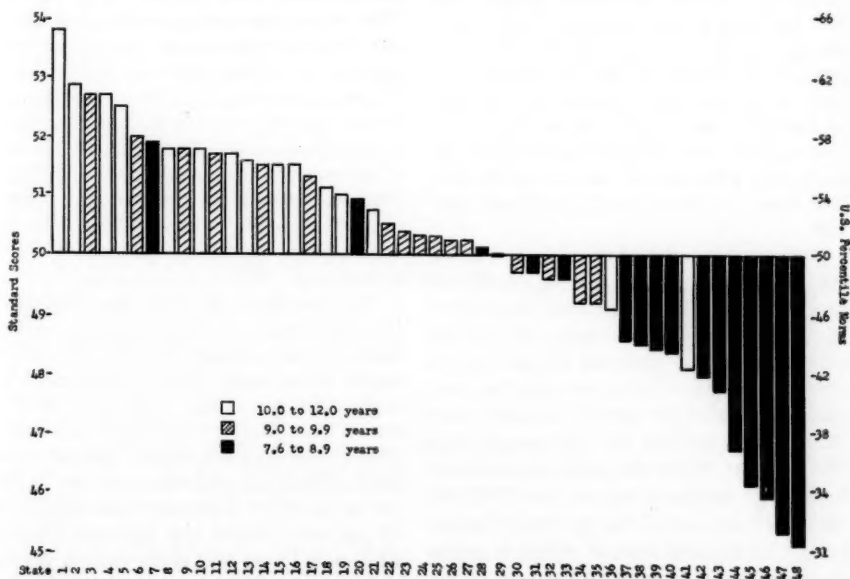


CHART 4.—States arranged according to median score on the Tests of General Educational Development in relation to median number of school years completed by persons twenty-five years of age and older, 1950.

One index of the educational status of the population is the level of formal education which the adults have had. In one state the median number of years of school completed by persons twenty-five years of age and older in 1950 was 12 years, while another state had a median of 10.6 years of formal schooling (4: 7). The median was 9.3 years for the country as a whole. If we divide the states into the upper and lower third of states on the basis of the GED performances of high-school Seniors, 94 per cent of the states in the upper third are at the national median or higher, while only 19 per cent of the states in the lower third reach this average level of education. These data are summarized in slightly different form in Chart 4.

One index of the extent to which existing educational opportunities are being used by the young people is the proportion of school-age children (5-17 years) who are in school. Taking into consideration both public and private school enrolment, the per cent of school-age children in school ranges from 75.6 per cent in one state to a high of 86.1 per cent in another state (4: 25). The average for the country in 1950-51 was 82.7 per cent. Of the top third of states on the basis of the GED test results, 81 per cent reach this national level of use of educational opportunity, while only 16 per cent of the bottom third of states reach this national average.

Still another index of the extent to which educational opportunity is being used is the proportion of college entrants to the number of eighteen-year-olds in a state. In 1948 the college entrants constituted 9.7 per cent of the eighteen-year-olds in one state as compared with 48.4 per cent in another state (5: 88). The average for the country was 24.6 per cent. When the states are arranged in order of median scores on the GED test results, 88 per cent of the top third of states reach this national level of college entrants as contrasted with only 19 per cent of the bottom third of states.

In spite of some exceptions, it is quite evident that the educational status of both the adult and the young people is related to the

level of achievement of high-school Seniors on the GED tests.

Some concomitants of education

There are many other variables which are related to education: some as causes of present educational conditions, some as effects of present levels of educational opportunity or present and past use of educational facilities, and some as concomitants of education. Whether this last group of variables is cause or effect or is associated with education through very complex relationships is beyond the scope of this paper. Four indices which are associated with the level of achievement shown by high-school Seniors in the various states are considered next.

During the first year of the Korean War, 16.4 per cent of those registered through selective service failed the Armed Forces Qualification Test (4: 10). Only 1 per cent of the registrants (18.5-26 years of age) in one state, and 56 per cent of the registrants in another state, were rejected for this reason. Thus the wartime manpower burdens among the states were distributed unequally. Of the states in the highest third on the GED tests, 94 per cent had less than the average proportion of rejections on the basis of the Armed Forces Qualification Test, while 81 per cent of the states in the lowest third on the GED tests had more than the national average proportion of rejections. These data are summarized in slightly different form in Chart 5.

The standard of living has frequently been associated with level of education. One index of the standard of living is the per capita retail sales. When summarized by states, the per capita retail sales in 1952 varied from \$1,413 in one state to a low of \$586 in another state (4: 28). The per capita retail sales for the entire country was \$1,050. Of the top third of states on the GED tests, 75 per cent exceed this national average, while only 13 per cent of the bottom third of states on the GED tests reach this level of retail sales per capita. This finding is in general agreement with a study reported by Davenport and Remmers (1). They found that the state means of high-school and

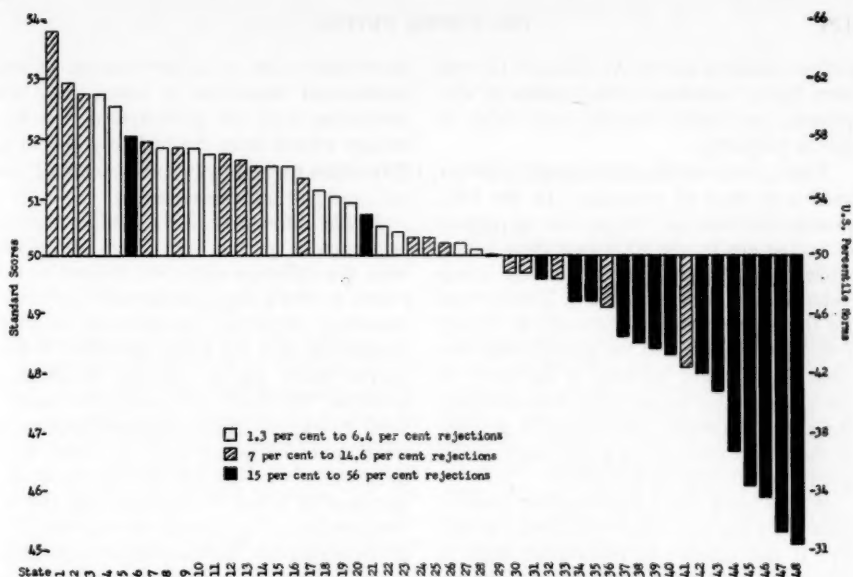


CHART 5.—States arranged according to median score on the Tests of General Educational Development in relation to per cent of rejections for failing the Armed Forces Qualification Test, July, 1950, to June, 1951.

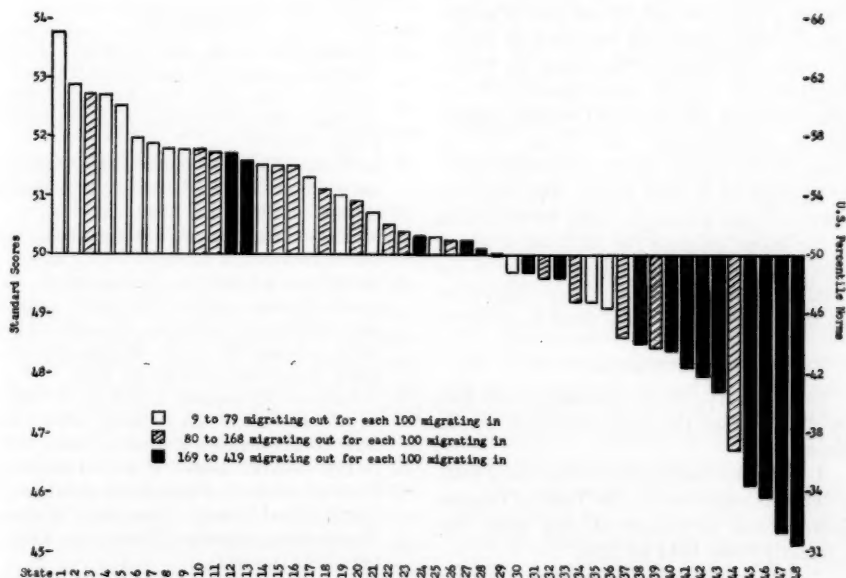


CHART 6.—States arranged according to median score on the Tests of General Educational Development in relation to number of people migrating out of the state for each 100 migrating into the state, 1950.

college students on the A-12 and V-12 tests were highly correlated with number of telephones, per capita income, and value of school property.

Voting behavior is also frequently associated with level of education. In the 1952 presidential election 79.6 per cent of persons of voting age in one state cast their ballot, while only 24.3 per cent of the age group voted in another state (4: 29). The average for the country was 65.3 per cent of the age group participating in the presidential election. Eighty-eight per cent of the states in the highest third on the GED tests exceeded the national average, while only 25 per cent of the lowest third of the states reached this level of citizenship participation.

A final index which has some relevance to these data has to do with population mobility. If the number of individuals born in other states who are now living in a particular state is related to the number born in the particular state but now residing in another state, we have an index of migration into and out of each state. The states vary considerably with regard to the direction of flow of migration. In 1950 there was one state in which, for every 100 persons migrating in, only 9 migrated out. At the other extreme was a state in which, for every 100 persons migrating in, 419 migrated out (7: 43). Of the states in the highest third on the GED tests, 63 per cent have more people migrating into the state than leaving it, while for the states in the lowest third on the GED tests, 88 per cent have more people migrating out of the state than migrating in. These results are shown in slightly different form in Chart 6.

SUMMARY

In summary, three generalizations may be drawn from the data presented in this paper.

1. The national level of educational competence as measured by the Tests of General Educational Development has risen significantly from 1943 to 1955.

2. The states vary considerably in the performance of their high-school Seniors on the different tests. The differences are so great that high-school graduates from the

lowest states are at a disadvantage in any educational situations in which they are competing with the graduates of the secondary schools from the highest states. The differences undoubtedly have economic, social, and cultural consequences.

3. The differences in the median level of performance on the GED tests of Seniors from the different states are related to the extent to which financial support is given to education, the level of education of the adult population, and the extent to which young people make use of existing educational facilities. The GED test results are also related to level of citizenship participation in wartime mobilization and in voting in a presidential election. In addition, both the standard of living in the state and the attractiveness of the state from the viewpoint of population mobility are highly associated with quality of educational product as measured by this battery of achievement tests administered to high-school Seniors in their final two months of public school attendance.

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FEDERAL SUPPORT FOR EDUCATION

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THE COST of educating the youth of the nation will increase enormously in the next decade. This fact will inevitably sharpen the controversy regarding the role to be played by the federal government in meeting those costs. If sound judgments are to be made on this important question, the elements of the controversy must be re-examined continuously in an effort to keep before the people the basic issues involved, for these have in some instances become obscured in the heat of the argument.

THE FEDERAL GOVERNMENT IN EDUCATION

In many of the published statements on the subject, an impression is given that one of the questions at issue is whether the federal government is to participate at all in the financing of educational programs, the implication being that such participation would mark a new departure in the functioning of our national government.

If we have any notion that federal support for education is a new departure in government, we should immediately correct that misconception. In the period of our national existence we have worked out a system providing for co-operative arrangements between national, state, county, and municipal units of government that vary as the needs arise for effective governmental services. Education has been generally considered to be a function of the states, but even before the creation of our present system of federal government, effective steps were taken by the Congress, under the Articles of Confederation, to insure the promotion of public education. Since that time, through grants of land for promotion of ele-

mentary education and for establishment of state universities, through agricultural extension programs, and through support of agricultural and homemaking courses in the secondary schools, of vocational-education programs, of school lunches and of veterans' education and school-building programs, the federal government has been making a continuing and increasing contribution to public education in the nation. More than a half-billion dollars in federal funds were spent to build schools in local communities from 1935 to 1938, and in the past four years more than a half-billion dollars of federal moneys have been spent on local school construction under Public Law 815 (1). In the past four years also, 213 million dollars in federal funds have been paid out to local school districts under Public Law 874 to help meet the increase of current operating costs resulting from the impact of federal activities. The total federal contribution to educational activities in 1952-53 was over \$1,380,000,000.

It is true that in many of these instances, if not in most, participation by the federal government has resulted initially from nationally recognized emergency situations. The fact remains, however, that in education, as in many other areas of governmental services, the states and the national government have a long record of co-operative arrangements wherever and whenever the interests of both are affected.

The basic issue here is not whether federal revenues are to be used in financing the costs of public education but whether the policy of participation on a fire-fighting, emergency basis, which in the past has characterized at least the initial phases of federal

participation, is to be replaced by a long-range, well-planned, general program of school support which will be designed to reduce the need for those emergency-type actions.

CONTROL OF EDUCATION

A second area of controversy can be identified around the arguments about the possibility of developing a system of federal support for education without centralizing the control of public education in a federal bureaucracy. This controversy grows out of the failure to recognize that two quite distinct functions of government are involved and that the two are not necessarily related.

One function is the operation of a tax program—the collection and distribution of revenues. This function our people have tended to place in the agency of government best able to perform it effectively. The only controls involved are those inherent in the operation of a tax program and the normal prudential controls required to safeguard public funds.

The other function—the operation of an educational program—our people have consistently affirmed, over more than a hundred years, is a function that they will keep close to the family and the local community. They have done so in the forty-eight state school systems without regard to wide variations in the level of support provided by the state toward the operation of local schools, and they have demonstrated again and again that it is quite possible to delegate a large measure of the revenue-gathering and revenue-distributing function to the larger unit of government while maintaining the operating function in the hands of the local community.

Related to the control issue, but not as evident in the publications and public discussions of the subject, are two rallying points around which powerful political forces are grouped: one concerning the southern states and the role of federal support in relation to historic racial arrangements in the South, and the other involving

the use of public funds for church-supported schools. Into both of these controversial and highly emotionalized arenas, where temperate discussion of factual data appears difficult, a tendency has been evident to advance and maneuver the generalized stalking-horse of federal control of education.

EQUALIZING EDUCATIONAL OPPORTUNITY

A third area of controversy relates to the question whether it is of concern to the whole nation that some parts of the nation do a better job of educating their children than do others. That variations in the quantity and the quality of education from state to state do exist has been demonstrated repeatedly through research by many agencies in and out of government. Research has demonstrated that the quantity and the quality of education bears a demonstrable and direct relation to the amount of money expended for education. The United States Office of Education in 1951-52 found states varying in mean annual expenditure for education per pupil from \$95 to \$352 (2). Even with adjustment of these figures for local variations in the cost-of-living index, a wide range from the high- to the low-expenditure states would remain. Research has also shown that the people in those communities having the least in quantity and quality of educational programs tend to be satisfied with the least.

The communities and the states providing the best educational programs have been shown to be the same communities producing the largest per capita wealth and thus making the heaviest demands on the national labor force (3). The increasing mobility of our population is reducing the probability that the community or even the state which pays for the education of a given individual will be the one in which he spends the productive years of his life. Conversely, the thoughtful citizen of any of our large metropolitan areas is in a position to estimate the terrible penalties, both social and economic, resulting from an influx of a poorly educated labor force.

Mobile populations, of the magnitude which we now have, create a national concern for the education provided in every community in the nation. The issue involved in this area of controversy is clear, and it is one of the most important upon which policy for support of education should be decided. The issue is whether all the nation's wealth shall be tapped to insure an adequate education for all the nation's children.

Men of vision are increasingly aware that a close relation exists between the level of education of a state and its economic well-being. With that awareness is coming understanding that the industrial centers of wealth serve their own interests when they contribute through the tax system to the costs of education in the poorer areas. By so doing, they not only improve the quality of that portion of the labor force which eventually gravitates to the industrial centers but also contribute to an improvement of economic conditions, which in turn creates new markets for the products of the industrial areas.

ABILITY

A fourth area of controversy rages around the question whether the tax machinery of the federal government is needed to tap the wealth of the nation for paying the costs of an adequate educational program—whether the states, if the federal tax load were reduced, could solve their own problems. Two insights into this line of argument should help reduce its importance in the general deliberations on the need for a federal program of support.

1. The range in mean per pupil expenditures in the forty-eight states is closely and directly related to the range in per capita wealth of the states, but the wealthiest states devote the smallest portion of their per capita wealth to education and the poorest states devote by far the largest. In other words, the states which are least effective in providing an adequate educational program are already exerting a far greater effort and committing a far larger portion of their total

wealth to the task than are the states which are providing the best education.

2. The argument that the federal government should reduce its tax "take" so that more of some hypothetical total of possible taxes can be tapped by the states ignores two obvious facts of our present economy: (a) The tax machinery of the several states is not equipped to perform the task and probably could not be so equipped without an enormously expensive and uneconomical duplication of the machinery. (b) Even if the machinery were developed, our economy has become so interrelated and so complex that no state-tax jurisdiction could be developed which could reach into the economy and extract revenues with the degree of equity or effectiveness which characterizes the federal tax program.

Curiously enough, proponents of the thesis that the federal government should relinquish a portion of its present tax field to the states also choose to ignore the fact that federal support for education would probably be the most effective means of increasing state revenues. Education accounts for the largest single block of state expenditures. Shifting a significant portion of these costs to support by federally collected revenues would free state revenue sources for the support of other services of government without creating the need for new state taxing machinery. A significant shift, perhaps of the order of five billion dollars per year (roughly equivalent to the present foreign-aid expenditures or to some current proposals for reduction in federal income taxes in this year of political campaigns), should have a more marked effect in easing state budget strains than would a comparable readjustment between federal and state programs of taxation.

The federal income tax, whatever its shortcomings may be, stands as the most effective and the most equitable tax-gathering instrument ever operated by any government. It is yielding revenues beyond the wildest imaginings of governmental officials of any other age, and it is preserving in the

process the most productive economy ever seen. With a vision before us of what might be accomplished if we could bring to all our children the educational opportunity now available to some, it would seem eminently sensible for the American people to devise the means for bringing this useful and productive tax instrument to bear on the task of making that vision a reality.

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SCHOOL ORGANIZATION IN RECENT TEXTBOOKS IN EDUCATION

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REPORTED HERE is an analysis of what recent textbooks in the field of education say about the organization of schools, "organization" being defined as the external pattern of organization with consideration of the grades, or years, included in the different successive units of the school system, as elementary school, junior high school, high school, senior high school, and junior college.

THE BOOKS REPRESENTED

The books examined for their treatment of school organization, which are listed at the end of this article, have dates of publication ranging from 1949 through 1955 and were those on the shelves of the College of Education Library in the University of Florida in March, 1955. This library follows the policy, while building up its collection of older materials, of adding all significant newly published books in education. Included in this analysis are twenty-six recent textbooks which have treatments of school organization. A few recent books dealing with school organization were omitted from the analysis to avoid overrepresentation of individual authors. For example, *The American Secondary School*, edited by Paul B. Jacobson (Prentice-Hall, 1952), was omitted because it was assumed he had representation through collaboration on the book, *Duties of School Principals*, written by Jacobson, Reavis, and Logsdon. Several important recent books on school administration were omitted from the list because they did not include even brief consideration of the patterns of school organization.

The distribution of dates of publication is as follows: 1949 (2 books); 1950 (6); 1951

(7); 1952 (2); 1953 (3); 1954 (4); 1955 (2). Of the 26 books, nine are new or revised editions of books previously published. The remainder are original editions. The distribution of courses for which these textbooks are intended is: secondary education (often called "principles of secondary education"), 9; secondary-school administration, 3; school administration, 6; introduction to education, 7; and other, 1. These are fields in which consideration of school organization would be expected, and one need not be surprised that the list does not include textbooks in educational psychology or methods of teaching, which seldom, if ever, touch on the pattern of school organization.

Almost all the authors of these books were at the time of publication members of university and college faculties, although a few had previously retired from administrative positions. The geographic distribution of authorship is widespread, including at least seventeen states and the District of Columbia. While there is some concentration of authors in California and in New York City, all sections of the country are represented, from New England to the Far West and from the North Central region to the South.

The treatments of school organization in these books range from a few brief paragraphs to as much as a dozen or more pages. Brief treatments will explain the small count of representation in some of the aspects of the analysis.

ORGANIZATIONAL PATTERNS IDENTIFIED

The material in the treatments of school organization in these books classifies conveniently under four headings, namely, the

reorganizational patterns identified; the positions assumed touching the two new units, the junior high school and the community or junior college; the advantages or purposes ascribed to these two units; and the organizational patterns preferred. Report here will follow this order.

The compilation of reorganizational patterns identified in the books is presented in Table 1. The tabulation does not include the

TABLE 1

FREQUENCY OF IDENTIFICATION IN
26 RECENT TEXTBOOKS IN EDU-
CATION OF DIFFERENT ORGAN-
IZATIONAL PATTERNS

Pattern	Frequency
Without junior college:	
6-3-3.....	26
6-6.....	20
6-2-4.....	15
7-5.....	1
5-3-4.....	1
6-4-2.....	2
7-3-2.....	1
7-2-3.....	1
With junior college:	
6-3-3-2.....	25
6-4-4.....	24
6-6-2.....	1
8-3-3.....	1

8-4 pattern because it is not reorganizational, although, to be sure, all the books mention it as the organization from which these patterns are departures. For purposes of simplification in presentation, the kindergarten has been omitted from these patterns, although it is usually included in the treatments. The table lists the patterns in two groups, those without and those with the junior-college years. The prevalent patterns in the first group are the 6-3-3, 6-6, and 6-2-4; in the second group, the 6-3-3-2 and 6-4-4. The remainder are seldom mentioned but might have had somewhat higher frequencies if the authors had not merely referred to "other" patterns without more specific identification. The 8-4-2 pattern is sometimes mentioned but is not included in the tabulation because it represents primarily addition of grades at the upper level of the local system rather than reorganization of it.

ATTITUDES TOWARD THE NEW UNITS

Because the reorganizational patterns identified have brought into existence the two new units, the junior high school and the community or junior college, it is in order next to report the positions taken by the authors of the books toward them. These attitudes are in certain simple aspects disclosed in Table 2. It may be seen that the lower of the two units receives at least mention in all the books. In eight of the books it is referred to as the "downward extension" of the secondary school or of secondary education. In an occasional book one also finds reference to this new unit as a composite of elementary and secondary education, or a statement like, "It is a moot point whether this institution . . . should be considered as elementary or secondary." As many as six-

TABLE 2

RECOGNITION OF JUNIOR HIGH SCHOOL
AND COMMUNITY-OR JUNIOR-COLLEGE
UNITS IN 26 RECENT TEXTBOOKS IN
EDUCATION

Unit and Recognition	Number of Books
Junior high school:	
1. Mentioned.....	26
2. Referred to as "down- ward extension".....	8
3. Commended.....	16
Community or junior college:	
1. Mentioned.....	26
2. Referred to as "upward extension".....	10
3. Commended.....	16

teen books commend this unit in explicit terms by asserting, for example, that it "has become . . . firmly established in the American public school system," or by presenting a summation of its "advantages." Most of the other books may be assumed to take the unit for granted.

The community- or junior-college unit is seen in the table to be mentioned in all the books and to be referred to in ten of them as the "upward extension of secondary education." However, an occasional author asserts that "whether it belongs to secondary or to higher education may be a debatable issue" or refers to it as a composite of sec-

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ondary and collegiate education. As many as sixteen of the books explicitly indorse the idea of the community or junior college or approve it by clear implication from stating the purposes of the unit. Most of the remaining books appear to take the unit for granted, especially for school systems with large populations.

The designation "community or junior college" in the table reflects the trend in these books toward replacing "junior college" by "community college." A dozen of the books use the term "community college," sometimes alternatively with "junior college," while use of the term "community college" is specifically advocated in six of the books as the preferable designation to indicate the broadening function of the units at this level. As one book puts it: "Most everyone wants to drop the connotation 'junior college' for the upper unit in the eight-year program, since traditionally it signifies a program of higher education, oriented to later professional education rather than to secondary education." Apropos of names for this unit may be mentioned a recent article arguing for calling these units "community-junior colleges."¹

PURPOSES OF THE NEW UNITS

Junior high school.—Attitudes toward the new units are reflected not only in the position taken as just reported but also in the purposes ascribed to them. In some of the books the purposes are explicitly formulated. In others they are readily transmutable from "reasons" for, or "advantages" of, the new units in the system. Several books, with brief treatments of reorganization, mentioned no purposes or advantages. The frequencies of recurrent purposes ascribed to the lower unit are presented in Table 3. This is done, for the sake of brevity, in key words or phrases, rather than in elaborate formulation, because discussion of junior high school reorganization over the years has in large degree standardized the concepts.

¹ L. J. Elias, "Why Not the Name 'Community-Junior Colleges?'" *Junior College Journal*, XXVI (November, 1955), 129-31.

The purposes listed in the table are those most often found in the books analyzed. One cannot be certain in a study of this nature, combining both subjective and objective procedures, of the actual count of books ascribing each of the purposes, for the reason that the meanings intended overlap and blend in considerable degree into one another. However, in view of the standardization of concepts mentioned, the count cannot be far from a faithful composite portrait of the purposes ascribed. The table discloses a noteworthy approach to consensus.

TABLE 3

PURPOSES RECURRENTLY ASCRIBED TO THE
JUNIOR HIGH SCHOOL BY 26 RECENT
TEXTBOOKS IN EDUCATION

Purpose	Number of Books
Recognition of needs of early adolescence.....	15
Exploration.....	10
Guidance.....	6
Differentiation.....	8
Provision of broadened program....	7
Transition and articulation.....	8
Retention.....	7
Economy of time.....	5

The purpose mentioned much more often than others has to do with serving the needs of youth in early adolescence. From its frequency of mention and the emphasis on it in the treatments, one is warranted in regarding it as the pre-eminent purpose of the junior high school and most or all of the remaining purposes as corollary to it. This inference of the pre-eminence of adolescence has been indicated elsewhere by the present writer.² The other purposes in the table have to do with exploration and guidance (these two being, in an important sense, complementary and thus understandably tending to merge into a single purpose); differentiation; provision of a broadened, or enriched, program; improved transition and articulation from school to school in the system; better retention in school; and economy of time. Concerning retention, the next but the last in the list, there is a disposition among

² Leonard V. Koos, *Junior High School Trends*, chap. ii. New York: Harper & Bros., 1955.

some authors to say that it is receding as a purpose because children have been remaining in school beyond the junior high school period because of influences outside the school. Economy of time as a purpose, the last one in the table, is also being discredited, say some of the books, in respect to plans of acceleration, while others see it as already achieved through provision of the broadened and enriched program.

Mention may be made of a few additional purposes or advantages identified in at least three of the books, namely, socialization, continuation of common integrating education, and solution of a local school-housing problem. The last of these is achieved in individual systems by removing Grades VII and VIII from elementary schools and

cizes the 6-year high schools for the meager provisions for reorganization in Grades VII and VIII.

Community or junior college.—A smaller proportion of the books undertake to formulate the purposes or to state the advantages of the community or junior college than do so for the junior high school, but there is a nearer approach to consensus among those that do this for the higher level. The purposes most recurrently identified are listed in Table 4. The preparatory purpose, the first one in the table, is also the first one traditionally, since junior colleges began by duplicating in their offerings the courses in the first two years of existing higher institutions. As junior colleges grew in numbers and moved toward the community-college concept, they have tended to broaden their purposes by including provision for general education, for "terminal" occupational preparation for semi- or sub-professional employments, and for adult and other part-time education, thereby aiming to serve the needs of all the population at this level. The last category of purpose in the table, democratization, or popularization, of education, refers to its increased availability through achieving the foregoing purposes and through lowered cost and/or proximity of this level of schooling attained by the spread of the community-college movement.

In addition to the categories listed in the table, there is scattered mention in the books of such advantages as "guidance," improved "articulation" of high-school and college work, and "continuation of home influences" for the youth in attendance.

Disadvantages of this new unit are seldom mentioned. One book demurs to the advocacy of the junior-college level as one to be universalized or popularized to the extent that this has been achieved for the high-school level, and another book, after listing advantages similar to those already mentioned here, refers to the disadvantages of increased cost of public education, diversion of funds from elementary- and secondary-school grades, the difficulty of the transfer student from a community college in finding

TABLE 4

PURPOSES RECURRENTLY ASCRIBED TO THE
COMMUNITY OR JUNIOR COLLEGE IN 26
RECENT TEXTBOOKS IN EDUCATION

Purpose	Number of Books
Preparation for further education . .	7
General education	6
Terminal occupational education . .	7
Adult education	5
Democratization of education	6

Grade IX from the high school and rehousing them in a new unit. While admittedly advantageous, this is more in the nature of administrative expedience than an educational purpose of reorganization.

A minority of the authors, at the same time that they are favorable to junior high school reorganization, point to some of its shortcomings as it has worked out in practice. One of these authors goes so far as to refer to the junior high school as the "neglected area in modern secondary education" and claims that it is "the sink of educational iniquity." This writer complains that there is no suitable program of teacher preparation for junior high schools. A few authors mention the "added breach" that has been introduced by establishing the junior high school; one mentions the limitations of reorganization in 2-year units including only Grades VII and VIII; and still another criti-

his place in a 4-year college, and the danger of eliminating smaller colleges.

PREFERRED ORGANIZATIONS

The treatments in the books could hardly be expected to rest with merely naming the different patterns of organization. Almost always they proceed by indicating preferences. The outcome of compiling these preferences as indicated in the twenty-six books is presented in Table 5. The only explanation of the matter in the table necessary concerns the subcategories "Cited superiority" and "Authors' preference." The distinction between the two is that, in the books counted among the former group, the considerations favorable are quoted or the advantages are presented as "claimed" by advocates of the pattern, whereas in the count for "Authors' preference" the authors actually commit themselves to the preference by speaking, for example, of the "soundness" of the plan. The distinction is made for this tabulation because, with the present writer's known advocacy of the 6-4-4 pattern, he desired to avoid wishful interpretation of the attitudes expressed in the books.

As the compilation stands, it is apparent that a large majority of the books (18) indicate the superiority of the 6-4-4 arrangement, either by quotation or by personal commitment. Five of the books cite the superiority of both this plan and the 6-3-3-2 plan without signifying the authors' preference for either. The authors of a single book indicate by citation the superiority of the 6-6-2 plan, while the treatments in only two books fail to commit the authors or to cite the superiority of one pattern over the others. Perhaps the most significant fact apparent from the tabulation is that the discussion in *none* of these books commits the authors to, or cites the superiority of, the 6-3-3-2 plan as against all others. This is the plan, be it recalled, that provides for a succession of three separate short units topped by the separate 2-year community or junior college. The only book that appears to support a separate 2-year unit in preference to the longer unit at this level (and this it does

by citation) is the book indicated as preferring the 6-6-2 plan in which the succession of three short units is avoided.

The table does not show that a minority of the books (in fact, four), at the same time that they indicate a preference for some plan including the community or junior college, concede the preferability of the 6-6 plan "in small communities" or "in systems with small enrolments."

Almost a third of the books extend consideration of school organization by indicating the "advantages" of the 6-4-4 plan over other patterns. All these mention the im-

TABLE 5

PREFERRED REORGANIZATIONAL PATTERNS AS INDICATED IN 26 RECENT TEXTBOOKS IN EDUCATION

Pattern and Preference	Number of Books
6-4-4:	
Cited superiority.....	9
Authors' preference.....	9
6-4-4 or 6-3-3-2:	
Cited superiority.....	5
6-6-2:	
Cited superiority.....	1
Without preference, either authors' or cited superiority.....	2
Total.....	26

proved continuity of the curriculum achieved through the longer school units with reduction in the number of breaks in the system. Smaller numbers refer to it as a workable plan "in terms of the physical growth and social development of youth" or note the improved guidance programs because of their continuity through longer units; the encouragement of retention in school because of the longer units; the encouragement of acceleration for more competent youth; better use of personnel; an increase in facilities at lower cost in small junior colleges through use of the same facilities at both high-school and college levels; and an increase in the feasibility of providing college-level education in smaller communities which cannot otherwise justify upward extension of the school system.

Two books only, which also mention advantages, suggest disadvantages of the 6-4-4 plan. One of them speaks of the plan as more difficult to set up than the alternative plans and elaborates on the obstacles. The other mentions the difficulty in scheduling athletic contests, the tendency of junior-college staffs to think of themselves as "college" teachers, and the greater difficulty of establishing "college spirit" among the students.

Preference for plans of organization is reflected also in charts usually depicting traditional, existing, and proposed grade groupings of school systems. These charts appear in seven of the books. With one exception they introduce the organization with the 4-year lower and 4-year upper secondary-school units as the latest, or culminating, pattern. Most of them include the one-year kindergarten below the 6-year elementary school, but two, instead, introduce two years of nursery school and break this 8-year span below the junior high school into a 4-year "primary school" and a 4-year "elementary school." This 16-year culminating pattern for local school systems is said to be "for long-term planning." A single book charts as the two latest patterns the K-6-4-4 and the K-6-3-2 in this order.

Before leaving the subject of preferred organization, mention should be made of the two textbooks in school administration which, although citing the superiority of one plan or another, go on to say that "it is possible to have good schooling in various setups" and that "no pattern of organization guarantees an adequate educational program." One of these, however, admits that an appropriate pattern facilitates the provision of a good program.

THE ACCEPTANCE OF REORGANIZATION

The results of the analysis reported here yield an impression of large areas of concurrence in the treatments of school organization in recently published textbooks in education and near unanimity in admitting the desirability of reorganization. The grade groupings identified for reorganization be-

yond all others are the 6-3-3, 6-6, 6-2-4, 6-3-3-2, and 6-4-4—the first three without, and the last two including, the community or junior college. Both junior high school and junior college, often referred to, respectively, as "downward" and "upward" extension of secondary education, appear to have almost universal approval or acceptance, and there is approach to consensus in the purposes ascribed to the new units. The preponderant preference is for a reorganization that brings a 4-year junior high school and a 4-year community or junior college in the 6-4-4 plan, or some variant of it at the lower school levels, depending on whether the kindergarten or the nursery school is incorporated in the pattern. Comparison of textbooks in education published around the turn of the century and for some years afterward, when junior high school and junior college were seldom mentioned, with books of recent date, would reveal a striking contrast provided by the remarkable degree of current acceptance of reorganization. So far as known to this writer, the 6-4-4 plan was not even mentioned in print before 1908.

As facts concerning practices in our school systems show, acceptance has gone much further than mere treatment in textbooks. Junior high school reorganization has by this date been carried into more than a majority of secondary schools, enrolling about two-thirds of all youth in high-school years. The junior-college movement, almost contemporary with the junior high school movement as concerns the time of its origin in discussion, has not yet gone as far but seems surely on its way to comparable development, at least in the larger school systems. No recent count has been made of commitments in practice to the latest pattern of organization to emerge in advocacy, that is, the 6-4-4 plan, but it is known that examples of systems operating on the plan are already to be found in several states.

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THREE THINGS TO LOOK FOR IN EVALUATING A JUNIOR HIGH SCHOOL

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BETWEEN THE BEST and the worst junior high school in the land, there are thousands of good ones and poor ones. It is not likely that the best or the worst will ever be clearly identified, but prospects of telling the good from the poor may be a little better. Even these prospects will be slim, however, unless valid distinguishing features are noted.

A feature which is often proposed as a basis for evaluation is the school's verbalized formulation of its functions or aims. The value of such a formulation is dubious, since the objectives of the junior high school have been stated and restated in similar generalities which are well known and widely accepted, or at least seldom disputed. Another approach to evaluation involves observation of specific practices, devices, or even tricks. This method, too, is questionable, for, with the current mania for wide and uncritical dissemination of reports of each variation in practice and for hasty and uncritical adopting of the new practices, a superficial similarity among schools has been created. Therefore it is suggested here that the important differences lie in a different dimension and that they are to be found in what may be termed the "process characteristics" of the school.

PROCESS CHARACTERISTICS

"Process characteristics" are qualities which permeate the total functioning of a school. They are more or less independent of specific professions of purpose, of particular structural features of the program, and of variations in content and procedure. Indeed,

regardless of the exact nature of these aspects of the school, certain attributes may be identified as indicative of an underlying spirit or flavor which persuades one that a given school is "good" or "poor."

Three such characteristics seem especially significant in appraising a school. They may be said to be to the school what liberty, equality, and fraternity are to democracy, or faith, hope, and charity to salvation. They are *balance*, *flexibility*, and *participation*.

Balance.—The quality of balance is perhaps best expressed negatively as the avoidance of extremes or the absence of over-emphases. Its theoretical basis is a recognition of multiplicity of values in education. Since the school cannot do everything which may be desirable, there are times when a choice must be made between alternatives or when it is clearly the part of wisdom to emphasize some things in preference to others. But in a great many matters it is all too easy for a school to neglect important aspects in its preoccupation with others. A number of areas in which this danger should be guarded against might be mentioned.

The junior high school, it would seem, should strive for balance between an orientation which is largely child-centered and one which is largely subject-centered. It is unsound to overlook either the direct or the indirect object of the verb *teach*; one must of course teach *something* as well as *someone*. Similarly, the school should avoid stressing either citizenship training or individual self-realization at the expense of the other. In a democracy the social order is as important to the individual as the individual citizen is

to society. So, too, with "preparation for life" and "the school as life": schooling is not *only* preparation for the future, but neither is it unconcerned with such preparation. The best way to prepare for adulthood may well be to live and learn effectively as an adolescent, but one of the indications of effective adolescent living and learning must be the quality of preparation for adult life.

In the same vein, there is the contrast between excessive concern, on the one hand, and gross neglect, on the other, of that which is utilitarian for making a living as opposed to what might be called utilitarian for making a life. To hold that the school has an obligation to provide for learnings which have obvious, immediate applicability to "everyday," "practical" living should not carry with it a denial of its obligation to provide for those learnings which are more subtle, remote, "impractical" in their application. Balance, once more, is needed. Balance in the program is also needed between subject-matter content and the common personal-social problems of pupils. The school cannot shirk its responsibility for promoting learning in the various subject areas any more than it can ignore the urgent need of pupils for assistance with their developmental tasks. Pupils' keen concern about their changing bodies or their changing relations with parents does not diminish the importance of changing fractions to decimals or changing energy from one form to another. Likewise there should be balance between academic and nonacademic studies. Disparaging the intellectual pursuits is as unjustifiable as assigning an inferior status to the practical arts and physical education.

Another area in which balance is desirable is the extra-class portion of the program. Frequently pupil activities are either slighted or overemphasized. The tail should not wag the dog, but neither should it be missing or too closely cropped. Within the extra-class-activities program, too, lopsidedness is to be avoided whether it involves sports that are thoroughly overshadowing service and aesthetic activities or bands that are eclipsing student government and publi-

cations. Balance must also be sought between stress on excellence of performance and stress on extensiveness of participation. Undesirable is the policy of selectively eliminating all but the few most talented in an activity and then coaching them to near perfection while the bulk of the student body is denied an opportunity to take part. Equally undesirable is a policy which, in the name of involving everyone in everything, glorifies dilettantism and closes off all outlets for excellence.

Within the classroom, too, balance is a necessary characteristic. There is danger, for example, both of making a fetish and of making an anathema of teacher-pupil planning. Obviously, maturing pupils need experience in planning, executing, and evaluating activities, and such opportunities should be provided somewhere in the program. It does not follow, however, that *all* their experiences during the school day must be thus handled. Where it is clear that careful adult arrangement and management of a situation is necessary if pupils are to obtain maximum benefit from an activity, it is somewhat ridiculous to jeopardize these values for the sake of being "modern." Another classroom abuse concerns the extent of variety in procedure. Unchanging, stereotyped methods indeed spawn boredom, which is learning's worst enemy, but perpetual use of novelty also has its ill effects in fostering insecurity and in thwarting the development of sustained, systematic modes of approach to problems.

And then there is the tendency to overcorrect for the overemphasis on competition. Because the perniciousness of constant and inequitable competition has been so forcefully argued, it has sometimes been concluded that all competition must be discouraged, with the result that individual striving and desire to excel have been subdued in an inordinate devotion to co-operative group activity. At the same time, to be sure, competitiveness is deliberately fostered and cooperativeness belittled in some classrooms on the assumption that this emphasis reflects American cultural values. Here, once more,

careful consideration will suggest the desirability of balance.

Numerous other instances of the need for balance could be cited—between exorbitant amounts of homework and none at all; between completely noncommittal, nondirective counseling and overly prescriptive advice-giving; between administration by edict and administrative stalemate due to a distorted concept of democracy; between such a lack of communication among staff members that the program is completely disjointed and such an insistence upon committee work that the individuality of teachers is lost—but, in the interest of balance in this discussion, attention will now be turned to the second process characteristic, namely, flexibility.

Flexibility.—In situations involving differences and change, rigidity and uniformity constitute a menace, and the junior high school level represents precisely such a situation. It is not suggested that there should be no prescription or that it is necessarily undesirable to standardize certain procedures. In fact, to keep conditions in a constant state of flux, to treat every case as unique, is absurd. Complete absence of routine could not long be tolerated. But when it becomes difficult to make exceptions to the routine or when there is great reluctance to do so, then the necessary flexibility is lacking. A few examples will illustrate points at which flexibility is essential.

Flexibility is needed, in the first place, in the administration of state and local school systems. Excessive central control makes for rigidity. We no longer encounter many of the local conditions which in Horace Mann's day led to the abuses that strong state education departments were established to correct. In many matters the setting-up of general principles indicating what the state considers desirable would be preferable to imposing specific requirements on schools. On a smaller scale this is also true with respect to individual schools within a local school system. The fact is that localities and school neighborhoods differ, and, unless these dif-

ferences are to be entirely ignored, some latitude of local action is necessary. Furthermore, where such latitude is lacking, little in the way of local initiative toward educational improvement is possible.

Within the school, flexibility with respect to pupil programing is imperative. Anyone who is conscious of the extreme diversity among pupils at the junior high school level must deplore the present tendency toward a completely common program for all. As Koos has shown, many educators are concerned over the disappearance or diminution of the variable portion of the program.¹ Advocates of the common program insist that newer group methods provide for everyone in the class something appropriate to the needs and interests of each. To the extent this is true, it is commendable, but to place *all* reliance upon individualization *within* the class seems imprudent. Rigidly to require identical programs for *all* pupils unduly restricts guidance personnel in their efforts to help pupils for whom curriculum modifications seem desirable. True, capricious selection of electives has dangers at any level and certainly at the immature level of junior high school youngsters, but, if guidance is available to help in the selection, as it is today in most schools, this objection is removed. Flexibility in programing calls for program variables and for viewing even the so-called "constants" as being expected of most rather than required of all.

Closely related is the need for flexibility in grouping. Mechanical schemes for grouping and arrangements which do not permit ready reclassification of pupils once grouped prevent desirable adjustments for individuals. So, too, do steadfast commitments to heterogeneity which preclude formation of special-purpose groups when they are clearly appropriate. Any system which permits no exceptions or which functions equally well whether or not the pupils being grouped are

¹ Leonard V. Koos, "Junior High School Reorganization after a Half-Century. III," *School Review*, LXI (December, 1953), 531.

known as individuals is too rigid for the junior high school.

The importance of flexibility in teaching scarcely requires demonstration, and it is mentioned here only because of the support it lends to the contention that throughout the program flexibility should prevail. It suffices to say that flexibility is lacking when a plan cannot be modified at an opportune moment or in an unforeseen exigency, when methods are stereotyped, when materials and expectations are uniform for all in a class. The matter of discipline might also be mentioned, because the existence of hard and fast rules with inevitable consequences for infraction is further evidence of insufficient flexibility in a junior high school. Regulations are generalizations, not universals. Exceptions should be possible; indeed they should be expected. What will be permitted or tolerated must vary with both circumstances and individuals. If discrimination seems to occur, it is objectionable only when the basis for it is irrelevant. When it is grounded on pertinent considerations, it not only is acceptable but is the essence of flexibility in discipline.

In effect, then, flexibility is freedom to adapt as circumstances require. Sensitivity to differences and to changes in circumstances in the first place, while necessary, is not sufficient, for it is of little avail to know what should be done if one is prevented by one's own fixed commitments from doing it. A final case in point is the school schedule, which, like a plan for a lesson, is essentially a sequence of events that is anticipated should nothing better arise. A staff deprives itself of needed freedom when the schedule is so inelastic that it cannot be altered on the occasions when something better does arise or is so prosaic that it does not allow extended blocks of time for those activities which require them.

Participation.—The third process characteristic suggested as indicative of a good junior high school is participation. The brief space devoted to it here is not, however, indicative of its relative significance.

Of the three attributes discussed, it is the easiest to detect. It is applicable to the pupil, faculty, and community levels. When participation is extensive and genuine, it is stimulating to observe; its absence is noticeable to the most casual observer.

Participation can be noted in the way classroom routines and management are taken care of; in the manner in which information is obtained, work is planned, and discussions are conducted in class; in the provisions for exceptional children; in the services that pupils render about the school and in the community; in the quality of student government; in the types of assembly programs that predominate; in the vitality of extra-class activities; and in the status of intramural athletics, to name but a few situations. In every facet of school life, good junior high schools deliberately encourage wholehearted, worth-while participation by pupils, not only because pupils learn little when they are passive, but because they are not likely to feel any great responsibility when everything is done for them (nor can they be blamed for misconduct when idleness abounds and pride in their school is lacking).

Basically, participation is the opposite of being a spectator. All too frequently junior high school pupils are mere spectators of a rather dull ritual performed for their benefit, with all good intentions, by adults. The teachers, in turn, are lookers-on at a dazzling administrative performance. The citizens in the community view the whole show from afar, without even a program to guide them, ignored until the collection plate is passed or a hitch develops.

Participation is not advocated primarily on grounds that it is democratic. It is not incompatible with democracy for a person with responsibility to have authority over those in his employ or for adults to exercise control over the immature. Participation by pupils is important because it is essential to learning and it fosters morale. Teachers ought to do nothing *for* pupils which pupils might profitably do themselves. The

profit may be either that the doing is a valuable learning experience or that it promotes a sense of belonging in, and responsibility for, *their* school.

For somewhat different, but equally obvious, reasons, participation by the faculty is a characteristic also important to look for. It involves policy-making, professional study, and community action. When the staff shares in making decisions, it is more inclined and better prepared to carry them out effectively. When the faculty studies professional problems, not only does the faculty improve, but so does the educational program. When teachers participate in community activities, they help build the relations which form the basis for the community's participation in its school. Such community participation, which is reflected in increased knowledge about the school and concern for it, insures that the school will perform more nearly the function expected of it and also provides assistance in so doing. There can be little disagreement that participation at all levels is a healthy sign in a junior high school.

THE PROCESS IS THE KEY

Three criteria for judging the junior high school are available: the product, the structure, and the process. To the extent that the quality of product can be determined, it should, of course, be used, but the inadequacies of evaluative means for this purpose are well recognized. The structural characteristics in themselves are of so little significance that they are next to useless in appraising a school. Is it good or bad that a school has core classes or homogeneous grouping or a student court? The *process*, on the other hand, is both significant and observable. It has been suggested here that the observer, whether external or local, look for evidences of balance, of flexibility, and of participation. To these might be added other characteristics, such as continuity and co-ordination, but the three discussed seem most salient. The school seeking to make improvements will have a good start if it begins by trying to identify and remove instances of undue overemphasis, of rigidity, and of passive on-looking in every aspect of its operation.

WORKSHOPPING IN INDIA

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IT WAS my privilege to participate in the leadership of four workshops in the major areas of India during 1953-54 under a Fulbright assignment. My colleagues and I became rather well acquainted with nearly 300 leading educators from every sector of the country. Some of these included members of the central government Ministry of Education and of the various state government ministries of education, but 253 were actual workshopppers: headmasters, headmistresses, state inspectors, classroom teachers, and staff members of teachers' colleges.

Our trainees represented all the major languages spoken in India (fourteen Indian languages and English). They came from high schools, ranging in size from 100 to 2,200 pupils, with an average of 550. They were middle-aged, with an average of sixteen years of professional experience. Ninety-one per cent were men, and 9 per cent were women. Of the men, 86 per cent had a wife and an average of four children, whom they supported on \$40 to \$100 a month.

It is doubtful that any other group of three hundred persons will play a more significant role than these educators in India's future and thus, indirectly, in the world's future. It is well to ask, then, what kinds of people *are* these guardians of India's youth? What are their backgrounds, their beliefs, aspirations for the future, their attitudes?

Through close association, conferences, autobiographies, and other sources of data, and through personal visits to more than one hundred Indian schools, I have come to know these people as *individuals*. Recognizing full well the dangers of stereotyping, I

feel that we may come to know these people best through a composite picture, and I shall try to give such a portrait here. Obviously there is no "Krishna" or "Kamala," and, if there were, there wouldn't be two alike. But through Krishna the reader may get some insight into the Indian headmaster's characteristics.

FAMILY LIFE

The "typical" trainee in our workshops, whom I shall call Krishna, was born during the first World War, just as India's "freedom movement" became intensified. He comes from a middle- or upper-class family, socially speaking. He is probably a Brahman (highest caste), and, if so, he is quite likely to let us know about it. He is usually from a family of lawyers, doctors, school headmasters, *samindars* (landholders), or government employees. His father was often "headman" of the village. Several fathers were police inspectors, invariably described as "an honest one."

Krishna was born into a "joint" family, where grandfather and his several sons and their wives and children all lived under one roof. Grandfather ruled the family and was family budget director and treasurer, and all income became common property controlled by him. Grandmother ruled the daughters-in-law, sometimes quite harshly. This arrangement (now breaking down) was fortunate, however, for two reasons: many of our Krishnas had lost mother or father or both at an early age and had been raised by an aunt or an older sister, and most of our trainees had been helped through school by common "family" funds.

Most of our Krishnas came from larger

families than they now support. Ten or a dozen brothers and sisters were not uncommon in these families, but only a third or a half lived beyond the first year or two. Even so, the joint family, with all the "brother-cousins," might include twenty or thirty persons, and a birth, or a death, or a wedding was a frequent event.

At the age of twelve Krishna was called home from school to marry a girl of seven whom he had never seen. After a four-day wedding ceremony, and feasting by two hundred or three hundred "relatives" that might put the bride's father in debt for life, Kamala stayed at her home and Krishna returned to school to prepare for the matriculation examinations.

Although Krishna did not go to coeducational institutions, he had several "love affairs" while in college. About a third of his friends tried married life with their childhood brides but rejected them for brides of their own choice. Krishna, however, returned to Kamala after college and has found her quite "faithful, subservient, and obedient." She has borne him six children, of whom four are living. All are in school, the oldest in college. Only a tenth of our trainees live in joint families today, and these include the half-dozen that have been to London to study while being supported from common funds. Nearly all these ancestral families are in financial straits today, especially since "Independence." Some have been torn up by the roots from what is now Pakistan, and the survivors are scattered to the four winds, often destitute. Many of our trainees report hair-raising and terrifying experiences during the partitioning period.

EDUCATION

Krishna went to a village primary school, but he had to go ten to twenty miles to find a high school, which was often a mission school. This meant dormitory life, often Spartan, at the age of eight or nine. Learning was by "rule of the stick," and punishments were often severe, the missionary schools apparently being no exception. At about sixteen years of age Krishna sat for the

matriculation examinations.

During the three-day ordeal of examinations Krishna and many of his classmates suffered violently from fright and nervous strain, but Krishna was one of the 30-40 per cent who passed. Now he was faced with the problem of whether to obey his grandfather (or perhaps oldest uncle, by now) or his father and return to his village, or to run away and study for law or government office. Many of our trainees "drifted" into teaching as a second or third choice but now find it quite satisfying.

Krishna went to the city to "read" in the university. After struggling through the first year on two or three annas worth of rice a day and a park for a dormitory, he received help from a "black-sheep" uncle (who had also run away as a youth) and finished his work for the B.A. degree. Again "nervous sickness" plagued his examination days, and he barely passed, along with 30 per cent of the group. (Some trainees failed the first time and reappeared successfully later.)

Quite a few of our trainees delayed the receiving of their B.A.'s by participating actively in the "freedom movement" and spending some time in jail. Of this they are quite proud, as they should be. Most of theirs was nonviolent action—non-co-operation, speeches, strikes, and the like.

EXPERIENCES IN THE WORKSHOP

Krishna was "deputed" to our course. This means that he received a letter, or perhaps a telegram, ordering him to report on the first day of the workshop, maybe only two or three days off. Eager with anticipation but troubled about leaving his home and his school on such short notice, he caught a train for our center, perhaps thirty-six hours away. On arrival, he learned that he was not to be lectured to but that he had entered a "workshop" in which he would join with others in small groups to work on personal, local problems of interest to him. Completely baffled at first by this democratic procedure, he learned to take part in discussions, trainee panels, and symposiums. He learned through films, posters, excursions

sions, and his fellow-trainees as resource persons. He enjoyed "cracker-barrel" sessions where he could put any kind of question to the American staff, of which the following are examples:

QUESTION: Why do you discriminate against Negroes and lynch them?

ANSWER: We are working on this problem just as you are working on your problem of caste discrimination.

QUESTION: Why are you making atom and hydrogen bombs?

ANSWER: For the same reason that you have munition factories right here in this city.

QUESTION: Why is America offering technical aid, including Fulbright professors, to India? What does she expect out of it? Will American imperialistic domination be better for us than British colonialism?

ANSWER: We are interested in helping willing countries preserve democracy. It is as simple as that. You must take us at face value and not search for ulterior motives.

Then there were easy questions: "How old are you?" "What is your salary?" "What is a vacuum sweeper?" "What is the inside of your house like?" These were common questions, usually asked, many of which reflected the influence of Communist and other propaganda, and perhaps of our American movies. Most of the questions, however, were prosaic ones about American education.

Krishna and his colleagues appreciated most "the friendly relationships with staff members," "their warmth and humanity," "their truly democratic spirit," "the fact that they never showed any anger." They all resolved to go back and introduce "workshop" methods into their schools, but their letters to us after leaving the workshop indicate that there are many obstacles and hazards in their paths. The traditional, British, regimented, academic, college-preparatory, bureaucratic system called "education" will not budge so easily. Although they were somewhat reluctant to leave the workshop, with its new type of learning environment, most of the trainees looked forward to returning to their own food patterns and to their own accent of the English

language instead of that of the Americans and of the Indians from other states (which vary so much from state to state that they gave us no end of trouble).

LIFE IN GENERAL

Krishna today is a respected, successful headmaster of a high school of about five hundred pupils, which he himself may have started and built. His outlook on life is a product of ancient feudalistic culture, oppression and revolution, and abused freedom. He is "lazy" about his religion, rejecting much of the idolism and paganism of his ancestors. He may be an atheist, though called a Hindu. If a Moslem or a Christian, he holds firmly to his beliefs. Regardless of their personal beliefs, most profess a love of God, and many have great respect for Buddha, Christ, Mohammed, and other prophets.

Krishna still favors sons but no longer deliberately allows his daughters to die, for he knows that, by the time they marry, dowries will be illegal. If necessary, he will advertise in the newspapers for a good match for his daughter, but he will not support child marriage or force her to marry against her wishes. One of our trainees with eight beautiful daughters (no sons) came in for more "ribbing" than Eddie Cantor.

Krishna is likely to prefer Ayur-Vedic medicine (using only herbs), or homeopathy, or Yunani, or other Eastern medicines to ours. He is likely to practice yoga and to take his problems to an astrologist for advice or solution.

Politically, Krishna is undecided. He may wear the Gandhi cap, symbol of the Congress party now in power, or he may lean toward a minority party. Krishna supports Nehru ardently but believes him to be surrounded by weak, or perhaps self-promoting, advisers. Krishna is impatient of what he considers lack of progress since 1947. He believes much of India is suffering from a lack of moral values; he maintains that even most of his school colleagues are dishonest. Krishna claims, however, that his own ideals are lofty and that he has dedicated himself

to the service of humanity—and this our observation seems to verify.

Of the headmasters to whom I talked, only one seemed to be a Communist, and even he was not pro-Russian. In spite of India's "neutralism" and her noncommittal attitude about falling in line with the democracy bloc, I am convinced that she would never support Russia under present conditions. She may not be our ally, but I can't believe that she will willingly be our enemy in this generation.

Krishna and most of his colleagues want to come to America to study. He wishes to find an American who will sponsor this venture.

Krishna and his fellow-Indians find many conflicts in their thinking and behavior. He decries idolatry but still bows to idols. He supports peace and nonviolence, as do his friends, but many of them engage in demonstrations and riots on slight pretense. He has learned about science, but he ignores basic health rules. He supports democracy but sends for a peon to move his chair for him.

It is the fervent hope of India and of the world that physical violence has ended in India, that the problems of Kashmir, East Pakistan, Goa, Pondichéry, Ceylon, can be settled peacefully, but Krishna is aware of the great social revolution that is taking place in India. Conflicts are to be expected in caste relationships (outlawed by the constitution but still widely recognized), marriage customs, family relationships, morals, education, religion, village and urban life. These changes, though coming at revolutionary pace, will take time. The practices of centuries will not be completely changed in one generation.

The future of India lies in no small measure in the hands of Krishna and his colleagues. At this time one can only speculate on the influence that the Fulbright and other educational programs will have on Krishna. He recognizes the needs for change, wants guidance, and is willing to teach his colleagues. But he represents such a small number! The world is asking much of him. Will he meet the challenge?

SELECTED REFERENCES ON SECONDARY- SCHOOL INSTRUCTION

III. THE SUBJECT FIELDS—Concluded

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THIS THIRD and final list of selected references on secondary-school instruction to appear in the current volume of the *School Review* contains items dealing with the subject fields not presented in the February issue, namely, industrial and vocational arts, home economics, business education, music, art, and health and physical education. The present list, like the first and second, follows a definition of "instruction" which includes its three main aspects of (1) curriculum, (2) methods of teaching and study and supervision, and (3) measurement.

INDUSTRIAL AND VOCATIONAL ARTS

WILLIAM J. MICHEELS
University of Minnesota

279. AMERICAN VOCATIONAL ASSOCIATION COMMITTEE ON RESEARCH AND PUBLICATIONS. *You and Research*. Washington: American Vocational Association, 1955. Pp. 24.

This booklet aims "to increase interest in, regard for, and expectancy of educational research." Describes the research responsibilities of the teacher, co-ordinator, teacher trainer, supervisor, director, and state staffs.

280. BAYSINGER, GERALD. "The Art in Industrial Arts," *Industrial Arts and Vocational Education*, XLIV (April, 1955), 121-22.

A discussion of the place of art and design in the teaching of industrial arts.

281. EVANS, RUPERT N. "Case Studies of Good and Poor Day Trade Teachers," *Industrial Arts and Vocational Education*, XLIV (November, 1955), 285-89.

Describes a pilot study of variables that hold promise for identifying good and poor teachers in vocational schools. Includes recommendations for further study.

282. *From School to Career*. Ann Arbor, Michigan: Prakken Publications, 1955. Pp. 24.

A booklet on the value of industrial education. Presents success stories of individuals from all over America whose industrial-education courses opened the door to careers.

283. GAUSMAN, CHESTER A. "Legal Aspects of Shop Accidents," *Industrial Arts and Vocational Education*, XLIV (September, 1955), 207-11.

Discusses school-district liability, instructor liability, and factors which contribute to accidents resulting in court action. Actual court rulings are cited as illustrations.

284. GIACHINO, J. W. "How Does Your Shop Rate?" *School Shop*, XIV (May, 1955), 13.

A quantitative check list intended to aid the shop teacher in evaluating his shopkeeping and the adequacy of the physical facilities.

285. GOLDSTEIN, WALLACE L. "Reading Characteristics in a Vocational Technical School," *Industrial Arts and Vocational Education*, XLIV (January, 1955), 10-11.

Describes the approach used in one school to identify students' reading abilities, interests, and habits. Results have already proved valuable in providing reading guidance for individual students and in the purchase of suitable reading materials.

286. GRASSELL, E. MILTON. "Competitive Industrial Arts Exhibits," *Industrial Arts and Vocational Education*, XLIV (April, 1955), 123-25.

Describes efforts of the Willamette Valley Industrial Arts Association, which set out to prove the value of competitive project exhibits. Procedural details are presented, along with several basic criteria which help to assure a successful competitive exhibit.

287. HIPPAKA, T. A. "Some Administrator Soul Searching," *Industrial Arts and Vocational Education*, XLIV (June, 1955), 179-83.

Twenty-eight questions are presented as the basis for a program of self-evaluation aimed at reducing the vulnerability of the schools to criticism and attack by various groups.

288. KURTH, E. L. "Industrial Arts' Newest Obligation," *School Shop*, XV (November, 1955), 7-9, 36.

As interpreters of industry, industrial-arts teachers are called upon to study means for helping young people understand the technological developments of atomic energy.

289. LINDAHL, LAWRENCE G. "Preparing Students for Industry," *Industrial Arts and Vocational Education*, XLIV (January, 1955), 7-8.

A consulting industrial psychologist considers five contributions which the shop teacher can make to prepare young people for entering industry.

290. NYWEIDE, GARRETT, and WINDLE, ALBERT G. "How Vo-ed Serves the Small Community," *American Vocational Journal*, XXX (April, 1955), 22-24.

A success story from Rockland County, New York, describing the comprehensive county-wide vocational program of seven schools with enrolments ranging from 223 to 796. Following an extensive survey, a decentralized plan was adopted which makes use of facilities in each of the schools.

291. PHILLIPS, KENNETH, and STEINBERG, WILLIAM B. "Industrial Arts on Television in San Diego, California," *Industrial Arts and Vocational Education*, XLIV (December, 1955), 315-17.

Details the steps that were followed, and the materials that were developed, for a series of six television programs on industrial arts. A useful reference for others who may be planning similar programs.

292. "School Shop Annual," *Industrial Arts and Vocational Education*, XLIV (March, 1955).

A yearly issue devoted largely to physical facilities for the teaching of industrial subjects. Includes illustrated articles on shop planning and modernization, lists of equipment and supply needs, and extensive advertising of tools and materials. A useful reference for one who is planning a new shop or modernizing an old one.

293. WATSON, JAMES F. W. "Making the Grade in School for Out-of-School Adjustment to Industry," *American Vocational Journal*, XXX (November, 1955), 24-25.

Describes how the "Pacific Construction Company" was organized in the vocational department of Pacific High School, San Bernadino, California,

to provide a realistic industrial environment during the training program. Examples of typical jobs are presented to show how the several departments co-operate in giving the learners firsthand experiences with the ways of industry.

294. WILLIAMS, VINCENT. "Let's Reexamine the Project," *School Shop*, XIV (June, 1955), 7, 20.

Considers the use of projects in teaching industrial arts and presents ten questions that ought to be considered in selecting any project for teaching purposes.

HOME ECONOMICS

LETITIA WALSH

University of Illinois

295. ALEXANDER, MARGARET. "Trends in Homemaking Education in the High Schools of Today," *Journal of Home Economics*, XLVII (October, 1955), 577-80.

Analyzes in a forthright fashion five characteristics of good homemaking programs and concludes with questions for administrators and teachers to answer with intellectual honesty when they seek directions for improvement.

296. AMIDON, EDNA P. "Teaching Homemaking in All-Purpose and Multi-purpose Rooms," *American Vocational Journal*, XXX (May, 1955), 22-24.

A condensation of various points of view on a topic of interest to administrators and teachers who may be planning new or remodeled homemaking departments.

297. BANE, LITA. "Trained Mind and Skilled Hand," *What's New in Home Economics*, XX (January, 1955), 21-23.

A well-balanced, constructive answer to the controversial question of whether homemaking skills are being neglected in today's teaching of home economics at the secondary level.

298. CARTER, FRANCES T. "A Study of Selected Aspects of Home Economics Programs in Junior Colleges," *Junior College Journal*, XXVI (September, 1955), 41-42.

A study of national scope that provides data on current home-economics programs in Grades XIII and XIV and acquires significance from the many secondary schools now planning to expand offerings in these grades.

299. COWLES, RUTH C. "Good Teaching Demands Good Facilities Plus," *Forecast for Home Economists*, LXXI (November, 1955), 11, 38-41.

A realistic and constructive discussion, by a state supervisor, of obstacles to teaching a broad, family-centered program in homemaking.

300. ELLENWOOD, LAURA C. "All-Purpose Homemaking Center: Asset or Liability?" *Practical Home Economics*, XXXIII (February, 1955), 21.

A thoughtful presentation of advantages and disadvantages of a relatively recent plan for homemaking laboratories as used in one school system.

301. FLECK, HENRIETTA, and FERNANDEZ, LOUISE. "The Teaching of Family Life," *Forecast for Home Economists*, LXXI (January, 1955), 14; (February, 1955), 23; (March, 1955), 47; (April, 1955), 11; (September, 1955), 48; (October, 1955), 58; (November, 1955), 16; (December, 1955), 5.

A series of brief articles on the planning of, the teaching methods for, and instructional aids valuable in, family-life education.

302. FORCE, ELIZABETH S. "A Glance at the Family Relationships Dilemma," *Educational Outlook*, XXX (November, 1955), 18-22.

A forceful presentation of the need of high-school boys and girls for study of family relations, even though the present difficulties in such teaching are freely acknowledged.

303. HALL, OLIVE. "Attitudes toward Homemaking Education in the Secondary Schools of California," *Journal of Home Economics*, XLVII (March, 1955), 165-70.

Summarizes opinions toward present offerings, expressed by homemaking and non-homemaking students, parents, administrators, homemaking teachers, and other teachers.

304. HALL, OLIVE. "Homemaking Education for Boys in California," *California Journal of Secondary Education*, XXX (November, 1955), 391-95.

Reports a survey of present practices in thirty-five secondary schools, including how courses were begun, enrolments, curriculum emphases, and recommendations for improvements.

305. HEUER, LEONE, and SCHAEFER, ROSEMARY. "Teaching Money Management," *What's New in Home Economics*, XX (September, 1955), 230-35.

Gives a wealth of suggestions on teaching a topic sometimes resisted by high-school students, and even by their teachers.

306. HOOVER, HELENE. "Sociodrama as a Teaching Method in Child Development and

Family Relationships," *Journal of Home Economics*, XLVII (April, 1955), 247-51.

An analysis of steps in using sociodrama, summarized in nine principles applicable to teaching many aspects of home economics.

307. KELSO, CAROLINE S. "Family Life Education at the Secondary Level," *Teachers College Journal*, XXVI (March, 1955), 92-95.

A brief analysis of the societal changes leading to the current emphasis on family-life education, accompanied by suggestions for giving such instruction effectively.

308. KIRK, ALICE J. "You're Using TV," *Journal of Home Economics*, XLVII (December, 1955), 727-29.

A plea for high-school teachers to accept the educational importance of television, to study the techniques, and to enrich their programs through increasingly skillful use of this medium.

309. KNOLL, MARJORIE M. "Using Research in Family Economics and Home Management in High School Teaching," *Journal of Home Economics*, XLVII (November, 1955), 673-76.

Reviews research findings in finance, time, and energy management, and presents recommendations for using them in curriculum planning.

310. STEVENSON, AILSIE M. "How Washington State Plans To Keep Inventories Up-to-date," *Practical Home Economics*, XXXIII (April, 1955), 12-13; (May, 1955), 46-48.

Two articles summarizing conclusions of a statewide committee attempting to determine amounts and kinds of equipment needed for an adequate program and the most efficient arrangement of this equipment.

BUSINESS EDUCATION

EDWIN A. SWANSON
San Jose State College
San Jose, California

311. BAHR, GLADYS (editor). "Basic Business," *UBEA Forum*, IX (March, 1955), 6-22.

An excellent series of articles related to evaluation of concepts, understandings, and attitudes in basic business education.

312. BOYNTON, LEWIS D. *Methods of Teaching Bookkeeping*. Cincinnati, Ohio: South-Western Publishing Co., 1955. Pp. vi+440.

This practical book, based on a nation-wide study of needs expressed by bookkeeping teachers, deals with principles of learning and teaching methods in the bookkeeping classroom.

313. *Business Education in California Secondary Schools: A Survey Report.* Bulletin of the California State Department of Education, Vol. XXIV, No. 11. Sacramento, California: State Department of Education, 1955. Pp. x+54.

The investigational work of three graduate students in three California institutions was used in preparing this bulletin. Particularly informative is the report on present practices in business education based on a study by Lawrence W. Erickson, "Selected Business Education Practices in the Public Senior High Schools of California."

314. CHRISTENSEN, EDWARD L. "An Experiment in Balance—General Education and Business Training," *American Business Education*, XII (October, 1955), 34-37.

Business educators at the junior-college level will find value in this report of one phase of an inquiry into the background and outcomes of a community-college curriculum designed for making a life and making a living, with specific reference to business education.

315. COLLINS, MARIAN JOSEPHINE. *Handbook for Office Practice Teachers.* Monograph 91. Cincinnati, Ohio: South-Western Publishing Co., 1955. Pp. 58.

Organized in four chapters—general educational considerations, physical provisions, organizational plans, and instructional procedures—this monograph provides help for the teacher of office practice.

316. EMMONS, HENRY T. "A Cooperative Appraisal of the High School Graduate in Business," *Journal of Business Education*, XXX (April, 1955), 302-4.

The Federal Reserve Bank of New York, a sizable employer of high-school graduates, presents a special report in the belief that appraisals by business organizations will give teachers specific ideas and techniques to apply in preparing students for entry into business.

317. *Evaluative Criteria for Business Departments of Secondary Schools.* Monograph 90. Cincinnati, Ohio: South-Western Publishing Co., 1954. Pp. 26.

This outline of factors to be considered in evaluating high school programs of business education was developed by a group of graduate students at Teachers College, Columbia University.

318. FORKNER, HAMDEN L. "Why Your Students Should Belong to FBLA," *UBEA Forum*, X (November, 1955), 41-42.

This article, written for sponsors and advisers of Future Business Leaders of America chapters, will be helpful to high-school principals as well.

319. GOLDSTEIN, EDWARD H. *The High School Department Head in Business Education.* Cincinnati, Ohio: South-Western Publishing Co., 1954. Pp. 80.

Activities of department heads, evaluation of practices, and implications and recommendations are the subjects of the three chapters. Department heads in fifty-three cities in twenty-nine states supplied basic data used in developing the report. The facts and suggestions should be helpful to any principal or department head.

320. GYLING, GRACE. "Producing a Newspaper: A Course in Office Training," *Business Education World*, XXXVI (December, 1955), 11-12, 35.

For those who feel that the school paper can be produced in the business department, this article will be interesting and helpful.

321. HAMPTON, ROBERT E. "The Work-Experience Training Program: Its Need, Its Promotion, and Its Establishment," *Balance Sheet*, XXXVII (November, 1955), 102-8.

Explains the origin, operation, and evaluation of a work-experience program.

322. HARDAWAY, MATHILDE. "The Why, What, and How of Clerical Training," *UBEA Forum*, IX (February, 1955), 9-12.

Gives credit to research findings that helped to lay the foundation for the development that has taken place in the clerical-training area and outlines just what can be done at the high-school level.

323. HERNDON, FRANK M. "Your Business Curriculum," *American Business Education*, XII (October, 1955), 38-39, 42.

Built around the basic point that business-education curriculum revision is a co-operative endeavor involving students, parents, teachers, businessmen, administrators, and others.

324. *High Schools and Employers.* Public Relations Advisory Panel, Bulletin No. 3. San Francisco, California: California Teachers Association, 1955. Pp. 14 (mimeographed).

Recommendations for the improvement of relation between education and business, with an excellent statement of position and proposed policy.

325. HOAG, EDWIN C. "Growing on the Job," *Journal of Business Education*, XXXI (November, 1955), 82-84.

An article by an experienced business teacher that every beginning business teacher should read.

326. HUGHES, JAMES M. "The Role of Supervisor in Business Education," *National Business*

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Education Quarterly, XXIII (May, 1955), 10-16.

From a generalist with many years of experience comes this informative discussion of what is involved in effective supervision of business education.

327. KNIGHT, KENNETH (issue editor). "Summaries of Studies and Research in Business Education—1954," *National Business Education Quarterly*, XXIV (October, 1955), 1-98.

This special research issue contains classified, brief, single-page abstracts of investigations of importance to all teachers and administrators who share the responsibility of developing policies and practices designed to improve business education.

328. LILES, PARKER, and GRATZ, JERRE. "Theory and Practice," *Journal of Business Education*, XXX (May, 1955), 365-68.

Spotlights some of the persistent indefensible practices in secondary-school business education and offers positive suggestions for eliminating or improving the problem situations that are discussed.

329. LLOYD, ALAN C. "Making the Most of Your Typing Classroom," *Business Education World*, XXXV (February, 1955), 16-18.

Here are practical suggestions, not only for the classroom teacher trying to use effectively what he has, but also for the administrator trying to plan and provide for what the teacher should have.

330. McCUNN, DRUMMOND J. "Public Relations through Business Education," *Balance Sheet*, XXXVII (September, 1955), 4-5.

An administrator sees in business education positive possibilities for support-winning and for an understanding type of contact with a large segment of the people of a community.

331. MARTIN, GEORGE E. "The Effects of Using Continuous and Interval Speed-forcing Programs in Learning To Typewrite," *National Business Education Quarterly*, XXIII (March, 1955), 37-43.

This summary of findings and conclusions of a research study will be especially helpful to teachers of typewriting and to their supervisors. The investigation provides some needed facts in this problem area.

332. OLSON, MILTON C. "Desks for the Bookkeeping Classroom," *UBEA Forum*, IX (March, 1955), 25.

Gives information about available types of desks and table equipment.

333. PATRICK, ELEANOR. "Modern Planning in a South Carolina School," *Business Education World*, XXXV (February, 1955), 9-11.

Suggestive and helpful for any teacher or administrator who must plan new business-department facilities in a small high school.

334. ROWE, JOHN L. (editor). "Personal-Use Typewriting," *UBEA Forum*, X (November, 1955), 8-22.

A helpful consideration of the relative merits of so-called "personal-use" typewriting classes.

335. SATLOW, I. DAVID. "Current Thought on Teaching Bookkeeping," *Journal of Business Education*, XXXI (November, 1955), 78-81.

Excellent quick review of the literature on the teaching of bookkeeping, based upon seventy-one articles appearing in business-education magazines during the school year ended June, 1955.

336. SATLOW, I. DAVID. "20 Fallacies in Bookkeeping," *Business Education World*, XXXV (June, 1955), 18-19.

Misconceptions or fallacies in the approach to, and the treatment of, the subject of bookkeeping are clearly set forth and briefly discussed.

337. TONNE, HERBERT A. "The Analysis of Secretarial Duties Thirty Years Later." Special Report. New York: Herbert A. Tonne (School of Education, New York University), 1955. Pp. 41 (processed).

For years repeated references have been made to the Charters and Whitley Study of 1924, "Analysis of Secretarial Duties and Traits." In this special report, eight graduate students have co-operated with Tonne in summarizing the significant data from the original study and in comparing these older data with the findings of recent studies.

338. TONNE, HERBERT A., and ARCHER, F. C. (editors). *Fundamental Processes in Business Education*. Twelfth Yearbook. New York: Published jointly by the Eastern Business Teachers Association and the National Business Teachers Association, 1955. Pp. 354. (For sale by University Book Store, New York University.)

Deals with various types of remedial learning and with opportunities and responsibilities for improving performance in fundamental processes in connection with the teaching of business subjects.

339. WIDDOES, H. V. "The Significance of Automation," *Business Education World*, XXXVI (September, 1955), 13-15.

Business educators and administrators who are wondering whether office workers might not be replaced by electronic data-processing systems should read this article dealing with trends in office-work and office administration.

MUSIC

GEORGE J. BELOW
New York University

340. AUSTIN, VIRGINIA D. "Will Someone Explain Why We Don't Overhaul Secondary-School Music?" *Music Educators Journal*, XLI (January, 1955), 44-47.

A thought-provoking criticism of music programs found today in many secondary schools. The author believes that too much emphasis has been placed on performance and not enough on music participation. The average high-school student, not endowed with special musical gifts which would gain him entry into the band, orchestra, or chorus, could still make music in a program of group participation using tonettes, autoharps, and rhythm instruments, much as is done today at the elementary-school level.

341. DUCKWORTH, GUY. "More than the Three R's," *Music Educators Journal*, XLII (November-December, 1955), 28-33.

Discusses the difficult and unusual problems connected with a music-education program in a rural high school with children of below-average intelligence who come from families of migrant workers.

342. GARDER, CLARENCE E. "Characteristics of Outstanding High School Musicians," *Journal of Research in Music Education*, III (Spring, 1955), 11-20.

This study, made in the high schools of a mid-western city and incorporating the use of both a standardized personality test and a questionnaire developed by the author, indicates that the amateur musician in the high school is an "active, highly intelligent individual with a wide range of interests, abilities, and activities both in and out of music. He is a recognized leader, . . . above average in academic achievement, and comes from an above-average home."

343. HARTSHORN, WILLIAM C. "Music in General Education," *Music Educators Journal*, XLII (September-October, 1955), 26-27.

The music educator, from the elementary to the college level, must be ready to provide musical experience in many kinds of curriculum situations. To tell how this can be achieved is the purpose of this article.

344. HUTTON, TRUMAN. "The Middle Way for School Orchestras," *Ethde*, LXXIII (April, 1955), 15.

Advocates a middle-way solution for the basic problem facing all instrumental instructors at the secondary level: "Should emphasis be placed on public performances or on player development?"

Includes many helpful suggestions for orchestra and band teachers.

345. JONES, ARCHIE N. "Secondary School Music," *Educational Music Magazine*, XXXV (November-December, 1955), 10-11.

Points to ways of developing better student attitudes toward music instruction on the high-school level.

346. KNUTH, WILLIAM. "General Music for the General High School Student," *California Journal of Secondary Education*, XXX (April, 1955), 223-26.

Considers the place of music in the general-education program of the high school, showing how it can "become a new adventure in firsthand experiences of music making, listening, and feeling for the general student with limited or no musical background."

347. KUHN, WOLFGANG. "Curriculum Changes in Music Education," *Music Educators Journal*, XLII (September-October, 1955), 54-58.

Presents in condensed form the new undergraduate curriculum in music education in use at the School of Music of the University of Illinois. The new program has been brought about by intensive research, by faculty meetings and conferences, and by studying recommendations of professional music-education organizations.

348. LICKEY, HAROLD L. "Scheduling the Music Program in a Small or Middle-sized High School," *Music Educators Journal*, XLI (February-March, 1955), 42.

Gives excellent suggestions for solving the many problems facing curriculum planners who wish to find time in a crowded schedule for a music program for students interested in both instrumental and vocal music.

349. MORGAN, HAZEL NOHAVEC (editor). *Music in American Education*. Chicago: Music Educators National Conference, 1955. Pp. xii+365.

The second edition of the *Music Education Source Book*, revised and largely rewritten. Section Three, "Junior and Senior High Schools," contains articles by outstanding music educators which discuss aspects of secondary-school music education. An essential for the library of any music educator.

350. RACKO, MARGARET. "General Music Program in the High Schools," *Educational Music Magazine*, XXXIV (January-February, 1955), 12-13.

A restatement of sound educational principles for making music a vital part of the general-education

program in the secondary schools. Recognizes the fundamental needs of all young people for an aesthetic and emotional outlet and formulates a philosophy of music education with this basic concept in mind.

351. RAFFERTY, SADIE M., and MICHAEL, LLOYD S. "Scheduling the Music Program in a Large Senior High School," *Music Educators Journal*, XLI (February-March), 43-44.

Includes a summary of all the music courses offered to the students in the excellent and comprehensive secondary-school music program of the Evanston (Illinois) Township High School.

352. RUSH, RALPH E. "Scheduling Orchestra in the Secondary School," *Etude*, LXXIII (June, 1955), 15; (July, 1955), 15.

Suggests a plan for making orchestra and band experiences available to all qualified students. Discusses the problems met by the music educator when he tries to find adequate time in the high-school schedule for band and orchestra classwork and rehearsal periods.

353. UNITED NATIONS EDUCATIONAL, SCIENTIFIC and CULTURAL ORGANIZATION. *Music in Education*. Paris, France: United Nations Educational, Scientific and Cultural Organization, 1955. Pp. 336. (United States Sales Agent: UNESCO Publications Center, 475 Fifth Avenue, New York 17.)

A collection of papers that were read at the International Conference on the Role and Place of Music in the Education of Youth and Adults held in Brussels in 1953. Contains many excellent views on music education as it is to be found today in this country and in other lands.

ART

MARGOT F. HAMP
University of Chicago

354. *Art in Science: A Portfolio of Thirty-two Paintings, Drawings, and Photographs from "Scientific American."* New York: Simon & Schuster, Inc., 0954.

Presents selected illustrations from the *Scientific American*, twenty-six of which are in color. The Introduction, by Gregory Kepes, on the interrelations of art and science is of particular interest to the art teacher.

355. BALLINGER, THOMAS O. "Some Problems and Issues in Art Education with Special Consideration for the Junior High Level," *Education*, LXXXV (February, 1955), 379-82.

Points out that the art teacher in the junior high school must respect the needs of the individual

pupil and allow him to work with materials which are a challenge to physical and mental growth.

356. COULES, JOHN. "Effect of Photometric Brightness on Judgments of Distance," *Journal of Experimental Psychology*, L (July, 1955), 19-25.

Presents experiments dealing with space and showing how the degree of brightness alters judgments of distance. Provocative for art experimentation.

357. "8,000 Years of Textiles. I," *American Fabrics*, XXXIII (Summer, 1955), 93-98.

A chronology of the important events in the history of one of the world's oldest and greatest industries. Useful as source material.

358. ERICKSON, ROBERT D. "Who's Got a Barrel of Money?" *Junior Arts and Activities*, XXXVI (January, 1955), 36-37, 45.

Describes ways in which corners can be cut to fit a limited budget. Points out that the art teacher must have an open mind and be willing to try anything to encourage conservation and sharing of materials.

359. FLOUD, PETER. "International Color Woodcuts," *Studio*, CXLIX (January, 1955), 10-17.

A good source of inspiration to the art teacher and the high-school student for designing colored wood-block prints.

360. FREEMAN, RICHARD V., and FRIEDMAN, IRWIN. "Art Therapy in Mental Illness," *School Arts*, LIV (March, 1955), 17-20.

Presents the pertinent view that the ordinary art teacher should not dabble in the area of art therapy for mental illness, since this area requires much training. In such therapy, art is primarily of value for treatment or diagnosis, and the therapist has a supportive position.

361. GAITSKELL, CHARLES D. and MARGARET R. *Art Education during Adolescence*. New York: Harcourt, Brace & Co., 1955. Pp. xii+116.

Represents six years of study of the adolescent. Wherever possible, the ideas contained were tested in the classroom situation. Therefore the book not only recognizes the adolescent's physical, emotional, intellectual, and social problems, but also presents art in a creative, practical way that will encourage the development of the individual within his potentialities.

362. GIBSON, JAMES J., PURDY, JEAN, and LAWRENA, LOIS. "A Method of Controlling Stimulation for the Study of Space Perception:

The Optical Tunnel," *Journal of Experimental Psychology*, L (July, 1955), 1-14.

Describes an experimental way of inducing and controlling the perception of surface and space.

363. HERDEG, WALTER, and ROSNER, CHARLES (editors). *Graphic Annual of International Advertising Art 1954-55*. New York: Hastings House, 1954. Pp. 208 with 710 illustrations.

Of use as a source of information and inspiration that will provide for the high-school student a view of a wide range of advertising media and techniques, freshness in design and layout, and an inspiration for new and unique ideas.

364. KARASZ, MARISKA. "Course in Creative Stitchery," *School Arts*, LIV (June, 1955), 11-16.

Embroidery has not been considered a creative craft until recently. This article describes how students in a creative stitchery course at Miami University (Ohio) learned to express themselves in a new way.

365. LASKA, JOHN. "Set To with Brace and Bit," *Junior Arts and Activities*, XXXVI (November, 1954), 23-25.

A plank or other unlikely wood material plus carpenter's tools were used to give high-school students broader sculptural experience and to help them understand the quality of contemporary sculpture.

366. LOGAN, FREDERICK M. *Growth of Art in American Schools*. New York: Harper & Bros., 1955. Pp. xiv+310.

A basic textbook summarizing the ideas, men, and movements that contributed to the art-teaching of today. An evaluation of current art practices is offered, along with some consideration for the future.

367. NEWTON, RITA. "Supervision Can Be Creative Too," *Junior Arts and Activities*, XXXVII (April, 1955), 31-33.

Points out that an art supervisor with a hypercritical and didactic attitude can harm an art program and discourage the teachers but that a perceptive supervisor has the opportunity to promote understanding among the superintendents, the teachers, the different grade levels, and the public.

368. PAUL, GRACE. "Salt Sculpture," *Design*, LVI (March, 1955), 47.

Opportunities for use of salt for sculpture are described, as well as places where it can be obtained and how to make it. This new inexpensive medium has great exterior beauty.

369. RICE, STANLEY. "What Is the New Vision?" *Printing and Graphic Arts*, III (May, 1955), 25-38.

A philosophical discussion of the "New Vision" in which the following three points are emphasized: (1) the "New Vision" as a neutral play of relatives, divested of other elements; (2) the effect of advances in science upon it; and (3) the nature of the two-way visual continuum.

370. ROSSBACH, ED. "Weaving for Screens," *Craft Horizons*, XV (January-February, 1955), 26-29.

Shows how, through the combination of different materials and spacings of threads, variety is produced in texture, scale, and color. Outlines factors which the teacher of weaving, or anyone experimenting with textures, can emphasize for a variety of results.

371. SCHENCK, GUSTAV. *Schöpfung aus dem Wasser Tropfen*. New York: George Wittenborn, Inc., 1954. Pp. 12 with 32 photographs.

The beautiful microcosm revealed in these photographs of a drop of water makes this a useful sourcebook for designer, craftsman, layman, and teacher.

372. TERWILLIGER, LEAFY. "Designing in Clay," *School Arts*, LIV (June, 1955), 30-31.

Excellent pictures show how experimenting with textures can lend interesting surfaces to pottery. Examples produced by children of all ages are a stimulating influence for teacher and pupil.

373. "World Review of Art Education," *School Arts*, LIV (May, 1955), 1-30.

Contains descriptions and pictures of art programs in the schools of the Netherlands, Germany, New Zealand, England, Italy, Burma, and Austria. Indicates the common elements in children's art and suggests that the so-called "creative-art" movement is international in scope.

HEALTH AND PHYSICAL EDUCATION

D. K. BRACE

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374. AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION, AND RECREATION. *Physical Education for High School Students*. Washington: American Association for Health, Physical Education, and Recreation, 1955. Pp. 416.

A new textbook in physical education for high-school students, suitable for state adoption. This illustrated book includes instructions for units in sports, games, athletics, dance, and recreation.

375. BROGNEAUX, JOHN. "Racial Integration in High School Interscholastic Sports," *Journal of Health-Physical Education-Recreation*, XXVI (April, 1955), 26, 37.

A report of how this problem is being handled in cities in various parts of the country.

376. BRONSON, RUTH R. "Correction of Physical Defects among Junior High School Students," *Journal of School Health*, XXV (November, 1955), 235-40.

The report of an interesting study, pointing out that the correction of health defects is more frequently accomplished where children have higher intelligence, come from better socioeconomic levels, and are more advanced in grade level. Helpful suggestions are given for the correction of health defects.

377. BUCHER, CHARLES A. *Administration of School Health and Physical Education Programs*. St. Louis: C. V. Mosby Co., 1955. Pp. 424.

Includes features of content and organization in addition to topics usually included in a book on administration.

378. COWELL, CHARLES C., and HAZELTON, HELEN W. *Curriculum Designs in Physical Education*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1955. Pp. 416.

An excellent book on curriculum construction in physical education, with curriculum patterns for elementary- and secondary-school programs.

379. DANIELS, ARTHUR S. *Adapted Physical Education*. New York: Harper & Bros., 1954. Pp. 538.

A good sourcebook on adapted physical education—program and administration—directed particularly at secondary-school and college level.

380. DUNCAN, MARGARET M., and JOHNSON, RALPH H. *Introduction to Physical Education, Health Education, and Recreation*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1954. Pp. 388.

A book of professional guidance for students going into physical education, including high-school Seniors who might be interested in the field.

381. DZENOWAGIS, JOSEPH G., MCPHERSON, PATRICIA V., and IRWIN, LESLIE W. "Harmful Health and Safety Misconceptions of a Group of Tenth Grade Girls," *Journal of School Health*, XXIV (November, 1954), 240-45.

A study of tenth-grade girls, listing misconceptions about health classified as to degree of seriousness. Should be helpful in planning health instruction.

382. "Evaluation Instruments in School Health Education," *Journal of Health-Physical Education-Recreation*, XXVI (November, 1955), 13.

A directory of check lists and other instruments for the evaluation of school health education.

383. KRAUS, RICHARD. *Recreation Leader's Handbook*. New York: McGraw-Hill Book Co., Inc., 1955. Pp. 300.

A practical guide to methods of leadership in a wide variety of recreation activities.

384. LANDIS, JUDSON C., and LANDIS, MARY G. *Building Your Life*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1954. Pp. 332.

A book for students on personality development and social adjustment.

385. LAYMAN, EMMA MCCLOY. *Mental Health through Physical Education and Recreation*. Minneapolis: Burgess Publishing Co., 1955. Pp. 520.

Background information about mental health and ways in which physical education and recreation may make a contribution.

386. LEDLIE, JOHN A. (editor). *Handbook of Trail Campcraft*. New York: Association Press, 1954. Pp. 188.

Practical projects in trail campcraft as tested in the Young Men's Christian Association.

387. NATIONAL HEALTH COUNCIL. *Health Careers Guide Book*. New York: Health Careers, National Health Council, 1955. Pp. 160.

Covers 156 different occupations related to all kinds of health services. May be obtained free by secondary schools.

388. NATIONAL RECREATION ASSOCIATION AND SOUTHERN REGIONAL EDUCATION BOARD. *Recreation as a Project in the Southern Region*. New York: National Recreation Association, 1955. Pp. 210.

A report of a two-year study in fourteen southern states, showing the need for recreation leaders and the extent of professional education for recreation leadership.

389. PHILLIPS, MARGERY; BOOKWALTER, CAROLYN; DENMAN, CHARLOTTE; MCAULEY, JANET; SHEERWIN, HILDA; SUMMERS, DEAN; and YEAKEL, HELEN. "Analysis of Results from the Kraus-Weber Test of Minimum Muscular Fitness in Children," *Research Quarterly of the American Association for Health, Physical Edu-*

cation, and Recreation, XXVI (October, 1955), 314-23.

Reports a careful administration and statistical treatment of the Kraus-Weber tests to a group of more than 1,400 Indiana school children, indicating that this group of children made scores agreeing closely with results found for European children. Those interested in physical-fitness testing should give close attention to this report.

390. SMALL, CLARE. "How To Recruit Better Student Majors," *Journal of Health-Physical Education-Recreation*, XXVI (November, 1955), 27-28.

Counselors should be interested in the suggestions given for vocational guidance relative to physical education.

391. STONE, ELEANOR B. "Corrective Therapy: A Needed School Program," *Journal of Health-Physical Education-Recreation*, XXVI (October, 1955), 26-28.

An explanation of the need for, and program features of, corrective therapy as a part of physical education in the school.

392. WHITEHEAD, FLOY EUGENIA. "Nutrition and the Teenager," *Journal of Health-Physical Education-Recreation*, XXVI (January, 1955), 7-9, 26.

Suggestions to teachers on helping high-school students plan meals, with a tabulation of nutritional value of foods.

FILMS AND FILMSTRIPS

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The following list of instructional motion pictures and filmstrips is limited to recent releases not previously listed in this journal. All listed motion pictures are 16mm sound films unless otherwise indicated.

INDUSTRIAL AND VOCATIONAL ARTS

393. *Industrial Arts: A Safe Shop*. 11 minutes, black and white. New York: Young America Films, Inc., 1955.

Explains basic safety precautions required for various operations in the woodworking shop.

394. *Plumber, Pipefitter, and Steamfitter*. A filmstrip in black and white. Valhalla, New York: Stanley Bowmar Co., 1954.

Produced by the National Film Board of Canada, this filmstrip deals with the history and importance of the plumbing and heating trades. Suggests the scope of required training and job opportunities.

HOME ECONOMICS

395. *Clothes and You: Line and Proportion*. 11 minutes, black and white or color. Chicago: Coronet Films, 1954.

Illustrates principles governing selection of clothes to suit various types of body figures.

396. *Hats for You*. 15½ minutes, color. Detroit: Audio-Visual Materials Consultation Bureau, Wayne University, 1954.

Shows women how to design and make their own hats.

397. *Homemaker Series*. Six 5-minute films in color. Los Angeles: Simmell Meserve, Inc., 1955.

Each film demonstrates a cooking operation in which a mother and daughter work together. The titles are (1) *Let's Make a Casserole*, (2) *Let's Make a Pie*, (3) *Let's Make a Cake*, (4) *Let's Make a Sandwich*, (5) *Let's Make a Salad*, and (6) *Let's Make a Meal in Twenty Minutes*.

McGraw-Hill Book Co., Inc., Text Films, New York

398. *Decorating Series*. Six filmstrips in color. 1955.

This series on home decorating is correlated with *The Home and Its Furnishings* by Morton. Titles include: (1) *Introduction to Color*, (2) *Color in the Girl's Room*, (3) *Selecting Furniture for the Girl's Room*, (4) *Arranging Furniture in the Girl's Room*, (5) *Fabrics in the Girl's Room*, and (6) *Accessories in the Girl's Room*.

399. *Etiquette Series*. Fifteen filmstrips in black and white. 1955.

This series is correlated with the textbook *Manners Made Easy* by Mary Beery. The titles are as follows: (1) *Home Ground*, (2) *School Spirit*, (3) *As Others See You*, (4) *Table Talk*, (5) *Stepping Out*, (6) *Table Setting*, (7) *Perfect Party*, (8) *Public Appearance*, (9) *Away from Home*, (10) *Developing Social Maturity*, (11) *School Assemblies*, (12) *School Plays and Concerts*, (13) *Class Parties*, (14) *Etiquette at Home*, and (15) *Etiquette in Public*.

400. *Teen Age Clothing Series*. Two sets of 4 filmstrips each, all black and white except Nos. 3 and 4 which are in color. 1955.

These filmstrips are to be used as correlated material with the textbook *How You Look and Dress*

by Carson. The titles include: (1) *Grooming*, (2) *Care of Your Clothes*, (3) *Color in Your Clothes*, (4) *Right Clothes for You*, (5) *Sewing Equipment*, (6) *Sewing by Hand*, (7) *Hints on Making a Dress, Part I*, and (8) *Hints on Making a Dress, Part II*.

MUSIC

401. *Instruments of the Band and Orchestra*. A series of five 11-minute films in black and white or color. Chicago: Coronet Films, 1955.

The Youth Orchestra of Greater Chicago and the Joliet (Illinois) Township High School Band demonstrate the qualities and functions of various instruments of the band and orchestra, as indicated in the following titles: (1) *Introduction*, (2) *The Brasses*, (3) *The Woodwinds*, (4) *The Percussions*, and (5) *The Strings*.

402. *Music Series*. Three motion pictures in color. Burbank, California: Avis Film Productions, 1955.

The following three titles are the first of a series of music-appreciation films, each offering pictorial sequences to match the imagery and mood of a well-known composition: (1) *Toccata and Fugue*, (2) *Engulfed Cathedral*, and (3) *Fingal's Cave*.

403. *Two Part Singing*. 20 minutes, black and white. Hollywood, California: Johnson Hunt Productions, 1954.

This demonstration of two-part singing takes place in an actual classroom. The film was designed to encourage student participation and also to serve as an illustration of teaching techniques.

ART

404. *From Renoir to Picasso*. 32 minutes, black and white. New York: Brandon Films, Inc., 1955.

Adapted from the original European production by Paul Haesearts, this prize-winning film analyzes modern art with regard to three tendencies: the intellectual, the sensual, and the emotional. Many examples of paintings from European and American museums are shown for purposes of illustration and comparison.

405. *How To Make a Linoleum Block Print*. 10 minutes, black and white or color. Hollywood, California: Bailey Films, Inc., 1955.

Gives several methods of linoleum-block printing on paper and cloth, including the making of Christmas cards.

406. *Water Colors in Action*. 12 minutes, color. Chicago: International Film Bureau, Inc., 1954.

Demonstrates several techniques for painting a landscape.

HEALTH AND PHYSICAL EDUCATION

407. *The Nose: Structure and Function*. 11 minutes, black and white or color. Wilmette, Illinois: Encyclopaedia Britannica Films, Inc., 1954.

Deals with the physiological function of the nose and with nasal hygiene.

408. *They Grow Up So Fast*. 27 minutes, color. Washington: American Association for Health, Physical Education, and Recreation Film Sales, 1955.

Depicts the value and nature of school physical education. This interpretive film should be shown to civic clubs and parent-teacher groups.

409. *Three Films on Golf*. A set of three 10-minute films in black and white. New York: United World—Castle, 1955.

This set of three films on golf fundamentals is based on the book *How To Play Your Best Golf* by Tommy Armour (Simon & Schuster, 1954). The titles include: (1) *Grip and Stance*, (2) *Short Game of Golf*, and (3) *Swing Away*.

MCGRAW-HILL BOOK CO., INC., TEXT FILMS, NEW YORK

410. *Community Health and You*. 19 minutes, black and white. 1955.

Illustrates the functions of the local health department and its relations with other agencies concerned with public health.

411. *The Heart—How It Works*. 11 minutes, black and white. 1955.

Illustrates the functioning of the heart in animation, describes the work load of the heart, and suggests ways of maintaining a healthy circulatory system.

412. *Your Body during Adolescence*. 10 minutes, black and white. 1955.

Portrays factors affecting the growth of teen-age boys and girls and describes the structure and function of male and female reproductive organs.

EDUCATIONAL WRITINGS



REVIEWS AND BOOK NOTES

ARTHUR T. JERSILD, *When Teachers Face Themselves*. New York 27: Bureau of Publications, Teachers College, Columbia University, 1955. Pp. xii+170. \$3.25.

A fresh breath of air in professional education, at least for this reviewer, flows from the pages of Professor Jersild's recent book on anxiety. The publication brings new ideas, or at least repeatedly forgotten ideas, to the attention of educators.

At first scanning, the book seemed significant for its insights on school administration and supervision. Upon complete reading, it proved itself of equal significance for teaching methodology and for preservice and in-service teacher preparation. Perhaps its greatest significance, if readers will ignore the title and the special applications to teaching, should be in the lucid and revealing discussion of personal problems for the general reader. Any reader, whether professional educator or otherwise, may expect to gain deeper understanding of himself from the book.

The reader will be rewarded in several ways by this small volume. Not only will he find thought-provoking content, but he may also take delight in beautifully written prose. One is tempted repeatedly to copy a sentence or to read a paragraph to a friend. The style of writing brings to mind the better qualities of proverbs or of beautitudes, and it shares with these respected forms of writing a vulnerability from oversimplification, which, however, does not detract from either its charm or its thoughtfulness.

The book grows out of concern for the personality problems which upset so many of us. In terms of school children, we are reminded that up to 48 per cent of elementary-school children have been identified by careful research workers as maladjusted and that "every child is to some extent an anxious child" (p. 58). Professor Jersild develops the term "anxiety" to cover all the evil roots of maladjustment and of dispositions to maladjustment. Using the word in this fashion, the reader is likely to agree with his state-

ment that "it is not only those who tremble who are anxious" (p. 26)!

The persuasive line of reasoning of the book runs approximately as follows: Anxiety as the root of much unhappiness and inefficiency should be brought under control by each individual. Anxiety is an unsatisfactory basis for human life, and it should be replaced as a driving force by "an endeavor toward self-fulfilment . . . a striving to realize potentials" (p. 61). The anxiety which life produces can best be brought under control by "self-understanding" in regard to such features of life as loneliness, the search for meaning in life, sex, and hostility. Out of the conquest of anxiety comes "compassion," which is defined in part as "a way of entering into emotional fellowship" (p. 126). An essential function of formal education should be to help pupils acquire the self-understanding necessary for them to move away from anxiety toward compassion. Finally, and most importantly so far as this book is concerned, teachers who would help pupils rid themselves of anxieties must gain control of their own anxieties through self-understanding.

The book is the fourth publication by the author growing out of a continuing study of how education can help in the resolution of emotional problems. Several interview and questionnaire investigations are reported as background for the present volume, although this publication goes far beyond the data in interpretations and exposition.

The literary style and the insights of the book merit so much enthusiasm that it is difficult to think critically about this contribution. Professor Jersild unintentionally disarms the critic almost completely by his casual observation that "book reviewing often provides an outlet for hostile feelings" (p. 116)! Yet even those readers who are filled with self-understanding may be prompted by this book to raise various questions.

Some readers will surely want further details on practical procedures for the achievement of

self-understanding in schools and in teacher-preparation programs. Other readers may desire factual evidence of the achievements possible in self-understanding and of the relationship between these achievements and changes in behavior, in learning, and in personal happiness. Professional workers in psychology are likely to attempt translations of the language and concepts of this document into other formulations with which they are familiar dealing with human development. School administrators and supervisors will surely ponder the significance of these ideas for their work with teachers and with other persons.

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CHARLES D. GAITSKELL and MARGARET R. GAITSKELL, *Art Education during Adolescence*. New York 17: Harcourt, Brace & Co., 1955. Pp. xii+116.

Art Education during Adolescence deals comprehensively with the nature of an art program and how it should be suited to a specific age group. As the Introduction informs us: "This book appears after nearly six years of research with adolescents engaged in art activities . . . enrolled [in the Ontario school system] in the seventh to the twelfth grades" (p. v). Two hundred and nineteen classrooms were visited by the authors, and "careful note was made of each teacher's professional qualifications, the methods he employed, the attitudes of the pupils towards the studies and the art work they produced" (p. 16). In keeping with the Gaitskells' respect for the individual, two hundred pupils were separately studied in order to investigate the various stages of adolescent growth. Two hundred and forty schools assisted in one way or another in the compilation of this report, the purpose of which was to discover the most effective way to teach art to this age group.

The adolescent is described in some detail, and certain startling facts of his biography are revealed: for example, "Boys are twice as strong at eleven as they are at six but by sixteen their strength has doubled again" (p. 1). We are also told that the physical, intellectual, emotional, and social development of the adolescent may occur at different rates. Their motor skills, furthermore, may not match their strength, or they may have acute intellectual critical powers and not the ability to create art forms. During their periods of poor co-ordination it will be necessary for them to have much space to accommodate

their clumsiness. We learn that motor skills are specific and that "to work with these pupils in the art class is to work with individuals" (p. 6).

Many classroom conditions are described, and the qualifications of a good art program and an effective teacher are considered. We are never led to believe that the situations related, however, are the only valid illustrations for an art program for adolescents. In fact, the reader does not come away with one neat, patterned formula for art education but is constantly being reminded that every consideration is based on the expected enrolment, the budget, and the curriculum of a given system and on the physical growth peculiar to individual adolescents. We are nevertheless told that adolescents want to learn at certain stages of their development how to make something look like what they see. Therefore the teacher should preferably be an artist-teacher, and he should inspire the pupil to search for suitable ways and media with which to experiment in order to help himself clarify his ideas for expression. The most efficient program becomes a real learning process "when pupils can strive to reach the goals which they set for themselves" (p. 31).

The authors also discuss such subjects as planning the art room, grading art products, the history of art, filmstrips, museums, picture study, and opposing methods of teaching design. Many topics are aired here that affect the adolescent and his art activity. The casual reader may not always agree with what has been said, but he will find a consideration of most of his questions. Whether he is a layman, teacher, or art teacher, he will benefit from this study of the adolescent personality. He will find the chapter summaries good for a quick understanding of the discussion and the chapter bibliographies useful for further study. But, above all, the reader will be impressed by the fact that there is no formula for an art situation but that the individual adolescent is the factor that determines the requirements of his art program.

MARGOT F. HAMP

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MARTIN ROSOFF, *The Library in High School Teaching*. New York 52: H. W. Wilson Co., 1955. Pp. 124. \$2.00.

The high-school library is the co-ordinating agency for the curriculum, providing the mate-

rials which give body and substance to the school curriculum. These functions are clarified and emphasized by Rossoff in his book *The Librarian in High School Teaching*.

In order to enrich educational experiences, teachers need to be oriented to the nature and use of the school library and to the resource materials available there. This is one of the main reasons why all teachers and librarians and prospective teachers and librarians should be introduced to this book. Suggestions are given to help the high-school teacher make the school library a laboratory workshop and a center for guidance and reading programs. The author's aim has been to produce a concise, nontechnical manual for teachers, with emphasis on successful group practices.

The reviewer is concerned with an attitude projected by the author, since teachers and students might, if not guided, misuse the facilities of the school library. It is questionable whether the librarian needs to meet any class group coming to the library "armed with a battery of books, magazine articles, pamphlets, docu-

ments, and reports" (p. 17) and to be ready to distribute these materials. Library materials should be accessible because of the library's organization so that students may locate materials independently, guided by librarian and teacher. If a group of students, the teacher, and the librarian have co-operated in accumulating the needed materials for a class, that is a good practice, but it is not the librarian's responsibility to do this alone. Rossoff does indicate that students should locate materials independently, but the several references in his book to the idea that the librarian should collect most of the materials are somewhat disturbing.

The school library is an integral element in today's successful school program. Its role as a materials center, a guidance center (curricular and social or personal), and a study center is being demonstrated in many schools. For many teachers, these concepts are routine. For too many others, these concepts are revolutionary.

BLANCHE JANECEK

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CURRENT PUBLICATIONS RECEIVED

METHOD, HISTORY, THEORY, AND PRACTICE

- DEWEY, JOHN. *"The Child and the Curriculum" and "The School and Society."* Chicago 37: Phoenix Books, University of Chicago Press. Pp. xii+160. \$1.25.
- EYE, GLEN G., and LANE, WILLARD R. *The New Teacher Comes to School.* New York 16: Harper & Bros., 1956. Pp. xiv+376. \$4.50.
- FITZGERALD, JAMES A., and FITZGERALD, PATRICIA G. *Methods and Curricula in Elementary Education.* Milwaukee 11: Bruce Publishing Co., 1955. Pp. xiv+592. \$5.50.
- HICKS, HANNE J. *Administrative Leadership in the Elementary School.* New York 10: Ronald Press Co., 1956. Pp. xii+456. \$5.00.
- The Literature of Japanese Education 1945-1954.* Compiled by WALTER CROSBY EELS. Hamden 17, Connecticut: Shoe String Press, 1955. Pp. viii+210. \$5.00.
- SANDS, LESTER B. *Audio-visual Procedures in Teaching.* New York 10: Ronald Press Co., 1956. Pp. viii+670. \$6.00.
- School Business Administration.* Edited by HENRY H. LINN. New York 10: Ronald Press Co., 1956. Pp. vi+574. \$7.50.

Special Education for the Exceptional: Vol. III, Mental and Emotional Deviates and Special Problems. Edited by MERLE E. FRAMPTON and ELENA D. GALL. Boston 8: Porter Sargent, 1956. Pp. xxvi+700. \$5.50.

Teaching World Affairs in American Schools: A Case Book. Edited by SAMUEL EVERETT and CHRISTIAN O. ARNDT. New York 16: Harper & Bros., 1956. Pp. xvi+270. \$4.00.

VOGT, EVON Z. *Modern Homesteaders: The Life of a Twentieth-Century Frontier Community.* Cambridge, Massachusetts: Belknap Press of Harvard University Press, 1955. Pp. xviii+232. \$4.25.

WYETH, E. R. *Education in Queensland: A History of Education in Queensland and in the Moreton Bay District of New South Wales.* A.C.E.R. Research Series, No. 67. Melbourne, Australia: Australian Council for Educational Research, [n.d.]. Pp. x+214.

BOOKS FOR HIGH-SCHOOL TEACHERS AND PUPILS

- AMES, MAURICE U., BAKER, ARTHUR O., and LEAHY, JOSEPH F. *Science for Progress.*

- Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956. Pp. 568. \$4.40.
- BABCOCK, CHESTER D., and QUILLEN, I. JAMES. *American Values and Problems Today*. Chicago 11: Scott, Foresman & Co., 1956. Pp. 528. \$3.98.
- BAILEY, MATILDA, and LEAVELL, ULLIN W. The Mastery of Reading: *Worlds of Adventure*, pp. xxii+504, \$3.12; *Teacher's Guide for Bailey-Leavell: "Worlds of Adventure," Revised and Enlarged, and Leavell-Bailey: "The Mastery of Reading, Book I,"* pp. 96, \$0.80. New York 3: American Book Co., 1956 (revised).
- BRYANT, MARGARET M., HOWE, M. L., JENKINS, PHILIP R., and MUNN, HELEN T. *English at Work: Course One*, pp. xviii+526, \$2.96; *Course Two*, pp. xxii+522, \$2.96; *Course Three*, pp. xx+518, \$3.12; *Course Four*, pp. xviii+526, \$3.12. New York 17: Charles Scribner's Sons, 1956 (revised).
- HARRIS, JESSIE W., TATE, MILDRED T., and ANDERS, IDA A. *Everyday Living*. Edited by ALICE F. BLOOD. Boston 8: Houghton Mifflin Co., 1956. Pp. x+460+x. \$3.48.
- QUILLEN, I. JAMES, and KRUG, EDWARD. *Living in Our America*. Chicago 11: Scott, Foresman & Co., 1956 (revised). Pp. 704. \$4.16.
- RIDDLESBARGER, ADA, and STILLWAGON, NELL. *Easy English Exercises*. Yonkers-on-Hudson 5, New York: World Book Co., 1956 (new edition). Pp. x+310.
- STIERI, EMANUELE. *Fundamentals of Machine Shop Practice*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956. Pp. viii+322. \$5.00.
- SUTER, RUFUS. *A Gallery of Scientists*. New York 1: Vantage Press, 1955. Pp. 132. \$3.00.
- PUBLICATIONS IN PAMPHLET FORM
- "Advance Estimates of Public Elementary and Secondary Schools for the School Year 1955-56." Prepared by RESEARCH DIVISION, NATIONAL EDUCATION ASSOCIATION. Washington 6: Research Division of the National Education Association, 1955. Pp. 24 (processed).
- "Aviation Education Bibliography (Elementary School)." Compiled by KATHRYN S. HOWIE. Washington 6: National Aviation Education Council, 1956. Pp. 28 (processed). \$0.25.
- CASTETTER, D. DEE; STANDLEE, FLOYD S.; and FATTU, NICHOLAS A. "Teacher Effectiveness: An Annotated Bibliography." Bulletin of the Institute of Educational Research at Indiana University, Vol. I, No. 1. Bloomington, Indiana: Institute of Educational Research, School of Education, Indiana University. Pp. iv+106 (processed). \$1.00.
- Civil Defense for Personal and Family Survival: A Handbook for Teachers, Students, and Parents*. Prepared under the Supervision of the Division of Instruction of the State Department of Education by FRANK B. LINDSAY and EVERETT V. O'ROURKE in Co-operation with the Office of Education, U.S. Department of Health, Education, and Welfare, under Delegation of Authority from the Federal Civil Defense Administration. Bulletin of the California State Department of Education, Vol. XXV, No. 1. Sacramento, California: State Department of Education, 1956. Pp. vi+58.
- CURETON, EDWARD E., CURETON, LOUISE WITMER, and OTHERS. The Multi-Aptitude Test: Study Kit. New York 36: Psychological Corporation, 1955. \$1.25.
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WHO'S WHO FOR APRIL

Authors of news notes and articles

The news notes in this issue have been prepared by MAURICE L. HARTUNG, professor of education at the University of Chicago. RICHARD S. ALM, director of the reading clinic and assistant professor of education at the University of Hawaii, Honolulu, outlines the history of children's literature and considers the agencies which have contributed to the growth of a literature written especially for adolescents. GRACE S. WRIGHT, assistant specialist in secondary education, Office of Education, United States Department of Health, Education, and Welfare, summarizes requirements for high-school graduation as set by state departments of education and compares present-day requirements with those reported in 1932 in the National Survey of Secondary Education. HARRY BEILIN, research associate with the Institute of Child Welfare at the University of Minnesota, describes a study, using both interviews and questionnaires, designed to determine how teachers in one rural community are responding to the pressures and demands for change exerted by conditions without and within the school. ALLAN S. WILLIAMS, formerly teacher of mathematics at the Groton High School, Groton, Massachusetts, and at

present a graduate student at George Peabody College for Teachers, Nashville, Tennessee, discusses educational television, pointing out its values and potentialities, citing obstacles to the maintenance of an educational television station, and giving some pointers on the use of commercial television stations. EARL M. TAPLEY, director of special services at the University of Chattanooga, reports a study of the type of preparation needed for teaching general-education courses in junior colleges. CLAYTON M. GJERDE, professor of education at San Diego State College, San Diego, California, and MARVIN D. ALCORN, professor of education at the same institution, present a list of selected references on extra-class activities.

Reviewers of books

WARREN C. SEYFERT, head of the Milwaukee Country Day School, Milwaukee, Wisconsin. FRANK S. ENDICOTT, director of placement and associate professor of education, Northwestern University. LETITIA WALSH, chairman of the Department of Home Economics Education, University of Illinois. ROBERT C. SNIDER, assistant director of the Education Communications Service and instructor in education, University of Chicago.

HIGHLIGHTS OF OUR NEXT ISSUE

ROBERT J. HAVIGHURST, professor of education at the University of Chicago, will review the research on the nature and the interrelations of developmental tasks, giving consideration to the methods of discovering and defining developmental tasks, the methods of measuring performance on developmental tasks, and the interrelations of performance on the tasks at a given age and from one age to another. He will then describe the applications of the developmental-task concept that have been made in the field of education. FRANK R. PETERS, an examiner and instructor in education at the

University of Chicago, will present a report which is a good companion piece to B. S. Bloom's article (in the March issue of the *School Review*), which considered the relation of the results on the Tests of General Educational Development to financial support of education by the states and to other social data. Peters will examine the principles on which the GED tests are based and will report a study designed to determine whether non-high-school graduates who entered college or were employed in industry on the basis of their scores on the GED tests were successful in college or in their jobs.

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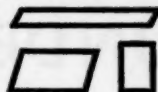
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ingenious (in jēn'yəs), *adj.* 1. clever; skillful in making; good at inventing: *The ingenious boy made a radio set for himself.* 2. cleverly planned and made: *This mousetrap is an ingenious device.* [*< L. ingeniosus < ingenium natural talent*] —*in gen'ious ly, adv.* —*in gen'ious ness, n.* —*Syn.* 1. inventive, resourceful. See *clever*.
 ➤ **ingenious, ingenuous.** *Ingenious* means clever; skillful; *ingenuous* means frank; sincere; simple: *Fay is so ingenious that she will think of a way to do this work more easily. The ingenuous child had never thought of being suspicious of what others told her.*

parallelogram (par'ə lel'ə-gram), *n.* a four-sided figure whose opposite sides are parallel and equal. [*< Gk. parallelogrammon, neut. < parallelos parallel + gramme line*]



Parallelograms

color cast (kul'ər kast'; -kăst'), *n.* television broadcast in color. —*v.* broadcast (a television program) in color.

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